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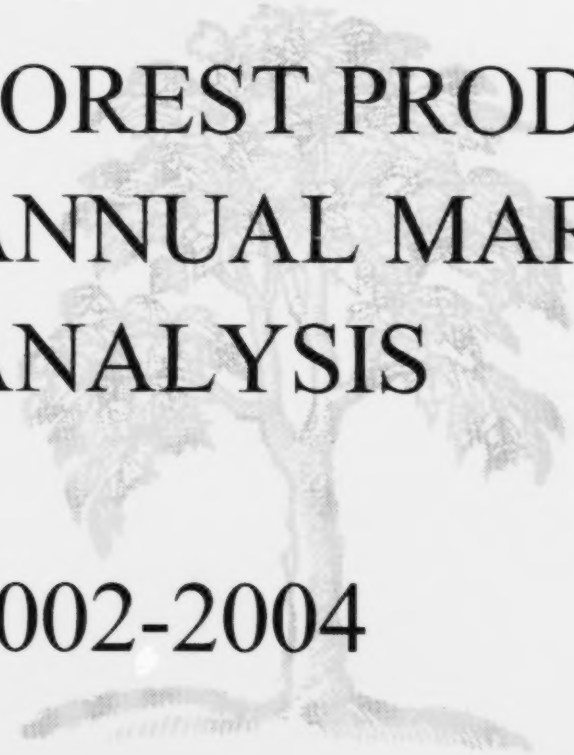

FOREST PRODUCTS ANNUAL MARKET ANALYSIS

2002-2004

UNITED NATIONS

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FOREST PRODUCTS ANNUAL MARKET ANALYSIS 2002-2004

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NOTE

The designations employed and the presentation of material in this publication do not imply the expression of opinion whatsoever on the part of the secretariat of the United Nations concerning the legal status of any coun territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

ABSTRACT

The UNECE/FAO *Forest Products Annual Market Analysis, 2002-2004* provides general, statistical and forec information on forest products markets and related policies in the UN Economic Commission for Europe regi (Europe, North America and the Commonwealth of Independent States). The *Annual Market Analysis* begins w an overview chapter, followed by a description of government policies affecting forest products markets. Afte description of the economic situation and construction-related demand in the region, five chapters based on ann country-supplied statistics, describe: wood raw materials, sawn softwood, sawn hardwood, wood-based panels and pa and paperboard. Additional chapters discuss markets for certified forest products, value-added wood products a tropical timber. In each chapter, production, trade and consumption are analysed and relevant material on speci markets is included. Tables included throughout the text present summary information and additional statistical tab upon which the analysis is based, may be found on the UNECE Timber Committee's Market Information Servi website.

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CONTENTS

Page

Preface ix
Acknowledgements x
Contributors to the publication xiii
Statistical correspondents xv
Data sources xvii
Explanatory notes xviii
Symbols and abbreviations xviii

Chapter 1 **Recovery of forest products markets in the UNECE region: Overview of forest products markets and policies, 2002-2004** 1
- 1.1 General policy and market developments from 2002 to 2003 2
- 1.2 Trends in 2003 and forecasts for 2004 6
- 1.3 References 12
- 1.4 Electronic annex tables for website only 12

Chapter 2 **Policy implications of forest products market developments in 2002 and 2003** 13
- 2.1 Chapter overview 14
- 2.2 Forest law enforcement governance and trade 14
- 2.3 Certification of sustainable forest management policy evolution 16
- 2.4 Policies for sound use of wood, wood promotion and building codes 17
- 2.5 Industrial development policies and structural oversupply 18
- 2.6 Climate change policy 19
- 2.7 Wood energy promotion policies 20
- 2.8 Trade policy, tariff and non-tariff barriers 21
- 2.9 Conclusion 23

Chapter 3 **United States housing remains strong despite economic weakness in UNECE region: Main economic developments affecting forest products markets in 2002 and early 2003** 25
- 3.1 General economic developments 26
- 3.2 Construction sector developments 29

Chapter 4 **Raw Material consumption on the rise despite weak global economy and local oversupply: Wood raw material markets, 2002-2004** 35
- Secretariat introduction 36
- 4.1 Trends in 2002 and 2003 36
- 4.2 Trends in 2003 and forecasts for 2004 41
- 4.3 References 43
- 4.4 Electronic annex tables for website only 43

Chapter 5 **Globalization revolutionizing sawn softwood markets in 2002-2004** 45
- Secretariat introduction 46
- 5.1 Trends in 2002 and 2003 46
- 5.2 Trends in 2003 and forecasts for 2004 50
- 5.3 References 52
- 5.4 Electronic annex tables for website only 53

Chapter 6 **Sawn hardwood markets stabilize in 2002-2004** 55
- Secretariat introduction 56
- 6.1 Trends in 2002 and 2003 56
- 6.2 Trends in 2003 and forecasts for 2004 59
- 6.3 References 61
- 6.4 Electronic annex tables for website only 61

Chapter 7 **Panel production rising despite falling prices and current overcapacity: Wood-based panels markets, 2002-2004** 63
Secretariat introduction 64
7.1 Trends in 2002 and 2003 64
7.2 Trends in 2003 and forecasts for 2004 68
7.3 References 70
7.4 Electronic annex tables for website only 70

Chapter 8 **Growth anticipated in 2004, but uncertainty still prevails in 2003 following an upturn for paper, paperboard, and woodpulp markets** 71
Secretariat introduction 72
8.1 Trends in 2002 and 2003 72
8.2 Trends in 2003 and forecasts for 2004 78
8.3 References 80
8.4 Electronic annex tables for website only 80

Chapter 9 **Markets for certified forest products, 2002-2003** 83
Secretariat introduction 84
9.1 Introduction 84
9.2 What are CFPs? 84
9.3 Supply of CFPs 84
9.4 Demand for CFPs 86
9.5 Outlook and conclusion 88
9.6 References 88

Chapter10 **Trade in secondary-processed wood products slowed: Value-added wood products markets, 2001-2003** 89
Secretariat introduction 90
10.1 Introduction 90
10.2 Import trends of secondary processed wood products in 2000-2001 90
10.3 Origins of imports in 2000 and 2001 92
10.4 Market drivers and developments for value-added wood products 93
10.5 Potential for growth without prosperity 94
10.6 Engineered wood product markets 95
10.7 References 97

Chapter 11 **China's imports drive tropical timber trade: Trends in tropical timber markets, 2002-2003** 99
Secretariat introduction 100
11.1 Introduction 100
11.2 Export trends 100
11.3 Import trends. 105
11.4 Conclusion 108
11.5 References 108

ANNEXES

List of Annexes 109

1. Components of wood products groups 110
   1. Roundwood flow chart 110
   2. Wood-based panels flow chart 110
   3. Woodpulp flow chart 111
   4. Paper and paperboard flow chart 111

2. Forest products terminology 112
   1. General terms and transactions 112
   2. Products 113
   3. Secondary-processed wood and paper products 118
   4. Engineered wood products 120

3. Countries in the UNECE region and its subregions 121

4. Sources of information used in the *Forest Products Annual Market Analysis* 122

5. Special chapters in former *Forest Products Annual Market Reviews* 124

6. Some facts about the Timber Committee 127

7. UNECE/FAO publications 128

8. Reader survey 130

LIST OF TABLES

1.1.1 Apparent consumption of sawnwood, wood-based panels and paper and paperboard in the UNECE region, 2000-2002 3
1.2.1 Apparent consumption of sawnwood, wood-based panels and paper and paperboard forecast in the UNECE region, 2002-2004 7
3.1.1 Changes in real GDP in the developed market economies, 2001-2004 27
3.1.2 Changes in real GDP in eastern Europe and the CIS, 2001-2003 27
3.2.1 Value of United States Construction, 2001-2002 30
3.2.2 European construction, 2002-2005 31
3.2.3 European residential construction, 2001-2005 33
4.1.1 Round wood balance in EU/EFTA, 2001-2002 36
4.1.2 Round wood balance in other Europe, 2001-2002 40
4.1.3 Round wood balance in Russian Federation, 2001-2002 40
4.1.4 Round wood balance in North America, 2001-2002 41
4.2.1 Roundwood balance forecast in EU/EFTA t, 2003-2004 41
4.2.2 Roundwood balance forecast in Other Europe, 2003-2004 42
4.2.3 Roundwood balance forecast in Russian Federation, 2003-2004 42
4.2.4 Roundwood balance forecast in North America, 2003-2004 43
5.1.1 Sawn softwood balance in EU/EFTA, 2001-2002 48
5.1.2 Sawn softwood balance in other Europe, 2001-2002 49
5.1.3 Sawn softwood balance in Russian Federation, 2001-2002 49
5.1.4 Sawn softwood balance in North America, 2001-2002 50
5.2.1 Sawn softwood balance forecast in EU/EFTA, 2003-2004 50
5.2.2 Sawn softwood balance forecast in Other Europe, 2003-2004 51
5.2.3 Sawn softwood balance forecast in Russian Federation, 2003-2004 51
5.2.4 Sawn softwood balance forecast in North America, 2003-2004 52
6.1.1 Comparison of European Union imports of sawn hardwood and logs, 2001-2002 56
6.1.2 Sawn hardwood balance in EU/EFTA, 2001-2002 57
6.1.3 Sawn hardwood balance in other Europe, 2001-2002 58
6.1.4 Sawn hardwood balance in Russian Federation, 2001-2002 59
6.1.5 Sawn hardwood balance in North America, 2001-2002 59
6.2.1 Sawn hardwood balance forecast in EU/EFTA, 2003-2004 60
6.2.2 Sawn hardwood balance forecast in Other Europe, 2003-2004 60
6.2.3 Sawn hardwood balance forecast in Russian Federation, 2003-2004 61
6.2.4 Sawn hardwood balance forecast in North America, 2003-2004 61
7.1.1 Wood-based panels balance in EU/EFTA, 2001-2002 65
7.1.2 Wood-based panels balance in other Europe, 2001-2002 66
7.1.3 Wood-based panels balance in CIS, 2001-2002 66
7.1.4 Overview of the wood-based panels industry in Russia, 1998-2002 67
7.1.5 Wood-based panels balance in North America, 2001-2002 67
7.2.1 Wood-based panels balance forecast in EU/EFTA, 2003-2004 69
7.2.2 Wood-based panels balance forecast in Other Europe, 2003-2004 69
7.2.3 Wood-based panels balance forecast in Russian Federation, 2003-2004 69
7.2.4 Wood-based panels balance forecast in North America, 2003-2004 69
8.1.1 Pulp, paper and paperboard balance in EU/EFTA, 2001-2002 72
8.1.2 Pulp, paper and paperboard balance in Other Europe, 2001-2002 74
8.1.3 Pulp, paper and paperboard balance in the Russian Federation, 2001-2002 74
8.1.4 Pulp, paper and paperboard exports and imports in Russian Federation, 2000-2002 75
8.1.5 Pulp, paper and paperboard balance in North America, 2000 76
8.2.1 Pulp, paper and paperboard balance forecast in EU/EFTA, 2003-2004 72
8.2.2 Pulp, paper and paperboard balance forecast in Other Europe, 2003-2004 79
8.2.3 Pulp, paper and paperboard balance forecast in CIS subregion, 2003-2004 79
8.2.4 Pulp, paper and paperboard balance forecast in North America, 2003-2004 80
10.3.1 Origins of five major countries' furniture imports, 2000-2001 92
10.3.2 Origins of five major countries' builders joinery and carpentry imports, 2000-2001 93
10.3.3 Origins of five major countries' profiled wood imports, 2000-2001 93
10.6.1 Glulam production and trade in North America, 2001-2004 95

10.6.2 North American I-beam production and forecasts, 2001-2004 96
10.6.3 North American LVL production, 2002-2004 96
11.2.1 Composite of exports by production regions, 2000-2002 101

LIST OF GRAPHS

1.1.1 Exports of primary-processed wood products in the UNECE region, 1997-2002 2
1.1.2 Apparent consumption of forest products in the UNECE region, 1998-2002 5
1.2.1 Apparent consumption of forest products in the UNECE region forecast, 1998-2004 8
1.2.2 Exports of primary-processed wood products in the UNECE region forecast, 1997-2004 8
3.1.1 Quarterly changes in real GDP, 2001-2003 26
3.1.2 Exchange rate of the euro, January 1999-May 2003 28
3.1.3 Real effective exchange rates of selected currencies, 1999-2003 28
3.2.1 United States residential markets, 2002-2003 30
3.2.2 Non-residential building construction in the United States, public and private combined, 2001-2006 31
3.2.3 European construction output by sector, 2002 32
3.2.4 European construction output by country, 2002 32
3.2.5 European housing completions, 1999-2005 33
4.1.1 Removals of roundwood in the UNECE region, 1998-2002 36
4.1.2 Major industrial trade flows in the UNECE regions, 1997-2001 37
4.1.3 Consumption of softwood industrial roundwood in the UNECE region, 1998-2002 37
4.1.4 Consumption of hardwood industrial roundwood in the UNECE region, 1998-2002 37
4.1.5 Delivered softwood sawlog prices in Europe, 1998-2002 38
4.1.6 Delivered softwood sawlog prices in North America, 1998-2002 38
4.1.7 Delivered hardwood sawlog prices, 1998-2003 38
4.1.8 Delivered softwood pulplog prices in Europe, 1998-2003 39
4.1.9 Delivered softwood pulplog prices in North America, 1998-2003 39
4.2.1 Consumption of softwood industrial roundwood in the UNECE region, 1998-2004 41
4.2.2 Consumption of hardwood industrial roundwood in the UNECE region, 1998-2004 42
5.1.1 North American composite sawn softwood prices 46
5.1.2 Export prices of Finnish sawn softwood, 1999-2003 48
5.1.3 Sawn softwood prices in Sweden, 1997-2003 48
5.1.4 Apparent consumption of sawn softwood in the UNECE region, 1997-2002 48
5.1.5 Major sawn softwood trade flows in the UNECE region, 1997-2001 49
5.2.1 Consumption of sawn softwood in the UNECE region, 1997-2004 50
6.1.1 Major sawn hardwood trade flows in the UNECE region, 1997-2001 56
6.1.2 Consumption of sawn softwood in the UNECE region, 1996-2002 57
6.1.3 German and French beech sawnwood prices, 1998-2003 57
6.1.4 Flooring production and consumption market shares in the European Federation of the Parquet Industry member countries, 2002 58
6.1.5 United States sawn hardwood prices, 1997-2003 59
6.2.1 Consumption of sawn hardwood in the UNECE region, 1996-2004 60
7.1.1 Consumption of wood-based panels in the UNECE region, 1997-2002 64
7.1.2 Major wood-based panel trade flows in the UNECE region, 1997-2001 64
7.1.3 European OSB, MDF and particle board prices 65
7.1.4 Particle board prices in the United States, 1995-2003 67
7.1.5 OSB prices in the United States, 1995-2003 68
7.1.6 United States imports of structural panels, excluding Canada, 1997-2002 68
8.1.1 Consumption of paper and paperboard in the UNECE region, 1998-2002 72
8.1.2 Major paper trade flows in the UNECE region, 1997-2001 72
8.1.3 Major woodpulp trade flows in the UNECE region, 1997-2001 73
8.1.4 Exports of market pulp in Russia, 1993-2002 75
8.1.5 Exports of paper and paperboard, 1993-2002 75
8.1.6 Russia's paper and paperboard exports and imports, 2000-2002 75
8.1.7 United States paper and paperboard production and growth in industrial production, 1997-2003 76
8.2.1 Consumption of paper and paperboard in the UNECE region, 1998-2004 78

9.3.1 Area of certified forest, 1996-2003 85
9.3.2 Top 8 countries' certified forest area, mid 2003 85
9.4.1 Certification chain-of-custody trends worldwide, 1997-2003 86
9.4.2 Chain-of-custody certificate distribution in the UNECE region, 2003 86
9.4.3 Chain of custody certificate distribution outside the UNECE region, 2003 87
9.4.4 FSC world-wide chain-of-custody distribution by industry sector, 2003 87
10.2.1 World imports of wooden furniture by product group, 1997-2001 91
10.2.2 Major imports of wooden furniture parts, 2001 91
10.2.3 World imports of builders' joinery and carpentry and profiled wood by product group, 1997-2001 91
10.2.4 Major importers of builders' joinery and carpentry, 2001 92
10.2.5 Major importers of profiled wood, 2001 92
10.6.1 Production of consumption of engineered wood products in North America, 1992-2007 94
10.6.2 World LVL capacity, structural and non-structural, 2002 97
11.2.1 Major tropical log exporters, 2000.2002 101
11.2.2 Tropical log price trends, 2002-2003 101
11.2.3 Major tropical sawnwood exporters, 2000-2002 102
11.2.4 Tropical sawnwood price trends, 2000-2002 102
11.2.5 Major tropical veneer exporters, 2000-2002 103
11.2.6 Major tropical plywood exporters, 2002-2002 103
11.2.7 Tropical plywood price trends, 2002-2003 104
11.2.8 Reconstituted panel exports by ITTO producers, 1990-2001 104
11.2.9 Major tropical reconstituted panel exporters in 2001 104
11.2.10 Pulp and paper exports by ITTO producers, 1990-2001 105
11.2.11 Major tropical woodpulp exporters in 2001 105
11.2.12 Major tropical paper exporters in 2001 105
11.3.1 Major tropical log importers, 2000-2002 106
11.3.2 Major tropical sawnwood importers, 2000-2002 106
11.3.3 Major tropical veneer importers, 2000-2002 107
11.3.4 Major tropical plywood importers, 2000-2002 107

LIST OF FIGURES

4.1.1 Wood raw materials components 44
10.6.1 Glulam growth potential lies in nonresidential sector 95
10.6.2 I-beam and LVL oriented to residential end uses 96

PREFACE

The *Forest Products Annual Market Analysis, 2002-2004* is a new publication focusing on policy and market developments in the UNECE region. It builds on the traditional market analyses published heretofore as the *Forest Products Annual Market Review*.

Sustainable development of the forest and timber sector is dependent on viable forest products markets. Accurate, objective, reliable and timely information on and analysis of international trends are vital for governments and other stakeholders in this sector. From their beginnings in the late 1940s, the UNECE Timber Committee and the FAO European Forestry Commission have placed high priority on monitoring and analysing forest products markets on the basis of statistics supplied by countries.

The *Forest Products Annual Market Analysis* is the annual flagship publication of the UNECE/FAO integrated programme in the field of timber and forests, serving the Timber Committee and the European Forestry Commission. It provides readers worldwide with the earliest comprehensive analysis on recent developments in the forest and forest product sectors in the UNECE region and its trading partners.

In line with both organisations' priorities, UNECE and FAO are working to make the analyses they produce more relevant to policy makers and a stimulus and support to meaningful policy discussion in international fora. Current policy issues, many of a cross-sectoral nature, discussed in the "Policy implications of market developments in 2002 and 2003" chapter include:

- Forest law enforcement, governance and trade
- Policy evolution of certification of sustainable forest management
- Polices for the sound use of wood, wood promotion and building codes
- Industrial development policies and structural oversupply
- Climate change policies
- Wood energy promotion policies
- Trade policy, tariff and non-tariff barriers.

The new *Forest Products Annual Market Analysis, 2002-2004* combines a statistics-based analysis of market trends and developments to early 2003, with the forward looking evaluation of the situation in autumn 2003 and prospects for 2004, based on information provided to and discussions at the Timber Committee session in early October 2003. While this 2-step approach lengthens production of the publication, it results in a truly comprehensive and up-to-date analysis of the region's forest products market situation, and should be of use of experts and market actors as well as those responsible for policy formulation in the forest and forest industries sector. It is also relevant to policy makers and experts in other sectors: It is noteworthy how many of the most urgent policy questions in the timber sector are closely intertwined with developments in other sectors, such as energy, environment and trade. We value readers' opinions and would be grateful for comments using the reader survey at the end of the publication.

This *Analysis* is the result of contributions from over 45 people and their organizations, including sector experts, national correspondents, colleagues in partner organizations and from the secretariat, in Geneva and Rome. I offer my appreciation to all those who have contributed, directly or indirectly, to preparing this new *Forest Products Annual Market Analysis*.

Brigita Schmögnerová
Executive Secretary
UN Economic Commission for Europe

ACKNOWLEDGEMENTS

It is with great pleasure that we thank the many people who directly and indirectly contributed to the production of this *Forest Products Annual Market Analysis, 2002-2004*. While we identify some people below, we implicitly acknowledge others working with them, or companies as well as institutions which made their time and travel funds available. The majority of the contributions for the *Annual Market Analysis* were donated. Some authors' direct expenses were compensated.

In addition to those named below, numerous other experts assisted on specific sections of the *Annual Market Analysis*, and their names are mentioned in the following list of contributors. The *Annual Market Analysis* is based on statistics received from official country correspondents who are listed for the first time in this publication. Our sincere appreciation goes to these people without whose efforts we would not have been able to produce this *Annual Market Analysis*. For some data in the chapter on certified forest products, the UNECE Timber Committee and FAO European Forestry Commission established an informal network of officially nominated country correspondents on certified forest products markets and certification of sustainable forest management. We thank those correspondents who contributed information for this chapter, for which there are no other official statistics.

In order of chapter number, we first acknowledge the external authors, then all those who assisted within the secretariat.

The construction section of the economic background chapter was written by Dr. Al Schuler, Research Economist, Northeast Forest Experiment Station, USDA Forest Service, Princeton, West Virginia and Mr. Craig Adair, Director, Market Research, APA-The Engineered Wood Association, Tacoma, Washington. Dr. Schuler is a member of the UNECE&FAO Team of Specialists on Forest Products Markets and Marketing. They also again wrote the section on engineered wood products markets in the value-added forest products chapter. The first part of the value-added products chapter was again written by our colleague from the International Trade Center (ITC), Mr. Jukka Tissari, Market Development Officer, International Trade Centre, Geneva, Switzerland who wrote the parts on value-added products, drawing in parts from work by colleagues at the International Tropical Timber Organization (ITTO). We continue to complement the analysis of primary-processed products with some indications of demand from secondary-processed products through the valuable work of these authors.

The wood raw materials chapter analysis was performed by Mr. Håkan Ekström, President, Wood Resources International. He is also Editor-in-Chief of *Wood Resource Quarterly* and the *North American Wood Fiber Review*, two publications tracking worldwide wood fibre markets, including prices. He in turn worked with collaborators, including Dr. Riitta Hänninen, Market Researcher, Finnish Forest Research Institute and some of the other authors mentioned below. We thank all of them.

Our appreciation once again for the sawn softwood analysis goes to Dr. Robert Kozak, Associate Professor, Department of Wood Science, University of British Columbia, Canada and his co-coordinator, Mr. Henry Spelter, Research Forester, Timber Demand and Technology Assessment Research Work Unit, Forest Products Laboratory of the USDA Forest Service. They in turn had subregional analyses from Dr. Nikolai Burdin, General Director, NIPIEIlesprom, Russian Federation, and former Chairman of the UNECE Timber Committee and Mr. Arvydas Lebedys, Marketing Specialist and independent consultant, Lithuania, who is currently working for the FAO Forestry Department. An additional contributor to their chapter was Dr. David Cohen, Associate Professor, University of British Columbia, Canada. We thank all of them for their analysis.

Mr. Michael Buckley, Consultant, World Hardwoods, wrote the sawn hardwood analysis for the third time. We sincerely appreciate his work, together with the necessary support from Mr. David Venables, the current European Director of AHEC, who again facilitated this continued collaboration. Mr. Buckley is Deputy Leader of the UNECE&FAO Team of Specialists on Forest Products Markets and Marketing.

For the first time Ms. Eva Janssens, Economic Advisor, European Panel Federation, coordinated the analysis and production of the wood-based panel chapter. She used the Federation's recent *Annual Report 2003* as a basis, but coordinated subregional analyses with contributors, including Dr. Burdin, who is also thanked above for his sawnwood contribution. We are truly grateful for Ms. Janssens' efforts on validating the statistics and the analysis of them. She is a member of the UNECE&FAO Team of Specialists on Forest Products Markets and Marketing. Mr. Jorge Najera, Economics Officer, UNECE/FAO Timber Branch also contributed to the analysis. We thank all these authors.

For the paper, paperboard and woodpulp chapter, four authors, representing the different subregions of the UNECE, contributed again this year. First we thank Dr. Peter J. Ince, Research Forester, USDA Forest Service, United States

Forest Products Laboratory, who coordinated the production of the chapter. Dr. Ince was also a principal author for the North American subregional analysis. Valuable contributions came from Professor Eduard L. Akim, PhD, Saint Petersburg State Technological University of Plant Polymers and the All-Russian Research Institute of Pulp and Paper Industry (on the Russian Federation), Bernard Lombard, Recycling and Economics Manager, Confederation of European Paper Industries (CEPI) (on the EU/EFTA subregion) with statistical assistance again by Mr. Eric Kilby, Statistics Manager, CEPI, and for the first time, Mr. Tomas Parik, Managing Director Wood and Paper a.s. and CEPI collaborator (for the Other Europe subregion). Both Dr. Ince and Mr. Spelter, sawnwood chapter author, work together in a research unit led by Mr. Ken Skog, Timber Demand and Technology Assessment Research Work Unit, Forest Products Laboratory, USDA Forest Service whom we would also like to thank for enabling this continued cooperation. Both Dr. Ince and Professor Akim are members of the UNECE&FAO Team of Specialists on Forest Products Markets and Marketing.

Once more we have the opportunity to thank Dr. Ewald Rametsteiner, Institute of Forest Sector Policy and Economics, Vienna, an Expert on Certified Forest Products Markets, for continued collaboration on the certified forest products marketplace analysis. Mr. Florian Kraxner, also of the Institute of Forest Sector Policy and Economics, was again a key assistant, as he gathered information from the above-mentioned informal network of country correspondents on the markets for certified forest products as well as a survey of the certification systems and key market players. Our thanks go to both of them. Dr. Rametsteiner is also a member of the UNECE&FAO Team of Specialists on Forest Products Markets and Marketing.

Continued cooperation enabled production of another tropical timber assessment by our colleagues in ITTO, Drs. Steve Johnson, Statistician/Forest Economist, and Michael Adams, Market Information Service Coordinator along with Ms. Masaki Miyake, Statistical Assistant. Their analysis is based on their *Annual Review and Assessment of the World Timber Situation 2001* and updated it with current market developments. Drs. Adams and Johnson are also members of the UNECE&FAO Team of Specialists on Forest Products Markets and Marketing.

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This *Annual Market Analysis* was produced as a joint effort by over 45 people. Ed Pepke (UNECE/FAO Timber Section) led and coordinated the work. The individual chapters had the following authors: 1. Ed Pepke and Kit Prins (UNECE/FAO Timber Section); 2. Ed Pepke and Kit Prins; 3. Al Schuler and Craig Adair (United States) (plus economic analysis from the UNECE *Economic Survey of Europe*); 4. Håkan Ekström (United States); 5. Robert Kozak (Canada) and Henry Spelter (United States); 6. Michael Buckley (United Kingdom); 7. Eva Janssens (European Panel Federation) and Jorge Najera (UNECE/FAO Timber Branch); 8. Peter Ince (United States), Eduard Akim (Russian Federation) and Bernard Lombard and Thomas Parik (CEPI); 10. Ewald Rametsteiner and Florian Kraxner (Austria); 11. Jukka Tissari (ITC), Craig Adair and Al Schuler (United States); 12. Steve Johnson, Michael Adams and Masaki Miyake (ITTO).

Alex McCusker (UNECE/FAO Timber Branch) collected, validated and produced the statistics, as well as updated some statistics-related passages. The national statistical correspondents are mentioned above and we would like to thank our colleagues in the European Forest Institute (EFI) and the UN Statistics Division for their continued support in preparing Comtrade statistics. Ronald Jansen, Chief, Commodity Trade Statistics Section, United Nations Statistics Division, provided the latest forest products trade statistics to EFI. Bruce Michie, Researcher, EFI, validated the trade data and produced the database upon which we produced graphs and tables for different commodities.

Graphics production and market research were by Juha Mustonen and Tapani Pahkasalo (Finland). Matt Fonsec (UNECE/FAO Timber Section) was responsible for the layout of the text, tables and graphs. Ms. Cynthia de Castr (UNECE/FAO Timber Branch) performed all administrative duties - we welcome her to the Market Analysis Team Sefora Kifle (UNECE/FAO Timber Branch) again prepared price data and supported authors with documents an journals. T.P. Cherman, Consultant, was the principal copy editor. Christina O'Shaughnessy (Trade Development an Timber Division) also did some copy editing as well as proofread most of the publication.

Initial technical reviews were done by Ed Pepke and Kit Prins (UNECE/FAO Timber Section). We appreciate the supplementary technical reviews from the Forest Products and Economics Division of the FAO Forestry Department by Wulf Killmann, CTS Nair, Adrian Whiteman, Gustave Best, Miguel Trossero, and Tiina Vähänen. Our thanks also to Dieter Hesse, UNECE Economics Analysis Division, who reviewed the economic overview chapter.

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The statistical correspondents listed below are the key suppliers of data for this publication. We are grateful for their essential contribution and their significant efforts in collecting and preparing the data. Complete contact information for the correspondents is provided in the companion issue of the *Timber Bulletin* "Forest Products Statistics, 1998-2002".[2]

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[2] "Forest Products Statistics" is available through info.timber@unece.org

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DATA SOURCES

The data on which the *Forest Products Annual Market Analysis* is based are collected from official national correspondents[3] through the FAO/ECE/Eurostat/ITTO Joint Forest Sector Questionnaire (JFSQ), distributed in March 2003. Within the 55-country UNECE region, data for the 19 EU and EFTA countries are collected and validated by Eurostat and for other UNECE countries by UNECE/FAO Geneva The JFSQ data, used in section 1 of each product sector chapter, are supplemented, in section 2, with forecast data provided for the UNECE Timber Committee meeting in October 2003. As the two data collection efforts do not use the same questionnaire structure and procedures and are asked at different times, variations appear between the tables in section 1 based on JFSQ data and in section 2 based on Timber Committee data.

The statistics for this *Analysis* are from the TIMBER database system. As the database is continually being updated, any one publication's analysis is only a snapshot of the database at that particular time. The database and questionnaires are in a state of ongoing development. Data quality differs between countries, products and years. So far, only a few countries of the CIS subregion provide data, although the largest producer (Russian Federation) does do so. Improvement of data quality is a continuing task of the secretariat, paying special attention to the CIS and central and eastern European countries. With our partner organizations and national correspondents, we strongly believe that the quality of the international statistical base for analysis of the forest products sector is steadily improving. Our goal is to have a single, complete, current database, validated by national correspondents, with the same figures available from FAO in Rome, Eurostat in Luxembourg, ITTO in Yokohama and UNECE/FAO in Geneva. We are convinced that the data set used in the *Annual Market Analysis* is the best available worldwide as of October 2003. The data appearing in this publication form only a small part of the total data available. "Forest Products Statistics" (*Timber Bulletin #2*) will include all of the data available for the years 1998-2002. "Forest Products Markets: Prospects for 2004" (*Timber Bulletin #6*) includes all the forecast data. The TIMBER database is available at the Market Information Service of the Timber Committee website at www.unece.org/trade/timber/mis.htm.

The secretariat is grateful that correspondents provided actual statistics for 2002 and, in the absence of formal statistics, their best estimates, as well as providing forecasts for 2003 and 2004. All statistics for 2002 are provisional and subject to confirmation next year. The responsibility for national data lies with the national correspondents. The official data supplied by the correspondents account for the great majority of records. In some cases, where no data were supplied, or when data were confidential, the secretariat has estimated figures to keep region and product aggregations comparable and to maintain comparability over time. Estimations are flagged within this publication but only for products at the lowest level of aggregation. Data for Belgium and Luxembourg are combined through 1998 while after this year the data are reported separately.

In addition to the official statistics received by questionnaire, trade association and government statistics were used to complete the analysis for 2002 and early 2003. A number of trade journals and internet sites were used for supplementary information, as well as institutions and experts, including national correspondents. Most of these sources are cited where they occur in the text, at the end of the chapters, in the list of contributors and in the annex reference list.

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[3] Correspondents are listed with their complete contacts details in the companion *Timber Bulletin*, "Forest Products Statistics, 1998-2002".

EXPLANATORY NOTES

"Apparent consumption" is calculated by adding a country's production to imports and subtracting exports. Apparent consumption volumes are not adjusted for levels of stocks because all countries cannot report stocks.

"Net trade" is the balance of exports and imports and is positive for net exports, i.e. when exports exceed imports, and is negative for net imports, i.e. when imports exceed exports. Trade data for fifteen European Union countries include intra-EU trade, which is often estimated by the countries. Export data usually include re-exports. Regional trade aggregates in tables include trade occurring between countries of the region.

The term "central and eastern European countries", used exclusively for presentational convenience, includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, The former Yugoslav Republic of Macedonia and Yugoslavia.

As in last year's *Analysis*, Europe has been split into "EU/EFTA" (19 countries) and "Other Europe" (34 countries). For a breakdown of the regions please see the map in the annex.

The term "softwood" is used synonymously for "coniferous." "Hardwood" is used synonymously for "non-coniferous" or "broadleaved". More definitions appear in the annex.

The forecast tables appearing in the electronic annex use an *italic* font to indicate data that are estimated by the secretariat.

SYMBOLS AND ABBREVIATIONS USED

-	nil or negligible
...	not available
$	United States dollar unless otherwise specified
CEECs	Central and eastern European countries (listed above in explanatory notes)
CIS	Commonwealth of Independent States
e	secretariat estimate
EFTA	European Free Trade Association
EQ	equivalent of wood in the rough
EU	European Union
EWPs	engineered wood products
FOB	free on board
GDP	gross domestic product
IMF	International Monetary Fund
m^2	square metre
m^3	cubic metre (solid volume of roundwood or processed product)
m.t.	metric ton
n	national estimate
NGO	non Governmental organization
PVC	polyvinyl chloride
r	repeated data from previous year
RWE	roundwood equivalent
SPWP	secondary processed wood products
USDA	United States Department of Agriculture
UNECE	Economic Commission for Europe
WWF	World Wide Fund for Nature

Chapter 1

Recovery of forest products markets in the UNECE region: Overview of forest products markets and policies, 2002-2004

Highlights

- Forest law enforcement, governance and trade policies are being developed as countries build partnerships to control illegal logging and the trade of forest products sourced from illegal harvesting.
- UNECE region forest products markets turned upwards in 2002, overcoming the dip in 2001, achieving some record levels.
- Certified forest area worldwide extended to over 150 million hectares by mid-2003, 90% of which are in the UNECE region, however, not all potentially labelled certified forest products reach final consumers.
- Total roundwood consumption for the UNECE region was 1.3 billion m^3, well within sustainable harvest limits.
- Structural oversupply has arisen for some products and subregions, and with strong global competition, this has increased pressure on the economic viability of forest management in some countries.
- Forest products markets remained weak in western Europe, with the exception of sawn softwood, which bounced back from a drop in 2001 to reach record production and exports levels.
- Strong housing construction in the United States drove demand for sawn softwood and structural panels, with an increasing amount being imported.
- Increased market share of imported forest products led the United States to continue quotas and tariffs on Canadian sawnwood imports in 2002 through mid-2003.
- Markets in Other Europe exhibited strong, continuing recovery in 2002, and for some products, pre-transition levels were attained.
- Consumption of wood energy in the EU/EFTA rose to a record level in 2002, leading panel and pulp manufacturers to express concern about competition for their raw material.
- CIS exports of roundwood and sawnwood expanded to record levels, but domestic consumption remained soft.
- Sawn softwood consumption, production and trade rose to record levels in the UNECE region in 2002, but sawn hardwood demand peaked in 1999 and has since been falling.

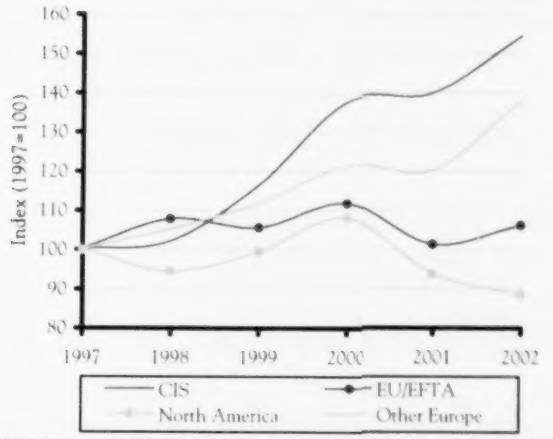
1.1 General policy and market developments in 2002 to 2003

1.1.1 Introduction

UNECE region forest products markets turned upwards in 2002, in volume terms at least, overcoming the dip in 2001, achieving near record levels (table 1.1.1 and graph 1.1.1). While sawnwood has reached new apparent consumption levels within the region, wood-based panels, paper and paperboard did not entirely surpass their 2000 high levels.

GRAPH 1.1.1

Exports of primary-processed wood products in the UNECE region, 1997-2002



Note: Primary-processed wood products include sawnwood, panels, paper and paperboard, woodpulp and roundwood.
Source: UNECE/FAO TIMBER database, 2003.

These developments were not universal among the four subregions: the Commonwealth of Independent States (CIS), the EU/EFTA, Other Europe and North America.[4] Only in EU/EFTA did demand decline slightly in 2002, as western European economies remained sluggish. Conversely, consumption in Other Europe and the Russian Federation have moved upwards in line with economic improvement as these countries move further through (and away from) the economic and political transition period. North American consumption, driven by the strong United States housing market and related demand for interior wood products, increased consumption of primary forest products by 3.5%, equivalent to an increase of 22 million m^3 of roundwood. Total roundwood consumption for the UNECE region was 1.3 billion m^3, which is well within sustainable harvest limits.

While the mature markets in western Europe and North America exhibit stability, the new markets in central and eastern European countries (CEECs) and the CIS are rebounding from the depths of the "transition recession". Government policies, both specific to the forest industry sector, and general socio-economic policies, are bearing fruit in the advanced reform countries, as evidenced by growing forest products consumption, production and trade. When analysing Other Europe and CIS markets for sawnwood, panels, pulp, paper and roundwood, the finding based on statistics reported for 2002 is a strong, continuing recovery. And for some products and trade, recovery of the pre-transition period levels was achieved in 2002.

1.1.2 Policy implications of forest products market developments

Forest law enforcement, governance and trade are the subject of the single most important policy discussion now facing the forest and forest industry sector policy makers. Within the UNECE region, many governments, international and national organizations, including non-governmental organizations, trade associations, and individual companies, are openly discussing the threats to sustainable forest management and to the profitability of the sector caused by illegal logging and the trade of roundwood and further-processed products sourced from unlawful harvests. Some governments around the world are currently considering how to better enforce existing legislation to control harvesting and exporting. However, considerably more difficult is the prevention of imports from illegally sourced forest products.

Other policies are affecting markets and, *vice versa*, market developments are influencing policies. For instance, climate change policies are reflected in promotion of biofuel sources, including wood. Changes in trade policy, such as removal of tariff and non-tariff barriers and new relationships between trade and environment policies could significantly influence trade patterns for forest products. Increased production capacities, both inside and outside the UNECE region, have resulted in some cases in a current oversupply and depressed prices.

Policies to forbid domestic logging in China have boosted roundwood exports from the UNECE region. However, imports of processed products back into the region have had consequences for previously established manufacturing and marketing channels, such as reduced furniture manufacturing in the United States. Improved forest law enforcement in Indonesia may be changing trade patterns for tropical timbers.

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[4] Countries within each subregion are shown in the annex figure titled "Countries in the UNECE region and its subregions".

TABLE 1.1.1

Apparent consumption of sawnwood[1], wood-based panels[2] and paper and paperboard in the UNECE region, 2000-2002

	Thousand	2000	2001	2002	Change 2001 to 2002 %
EU/EFTA					
Sawnwood	m^3	92 728	90 133	90 401	0.3
Wood-based panels	m^3	45 114	44 732	43 648	-2.4
Paper and paperboard	m.t.	79 419	79 724	79 287	-0.5
Total	m^3 EQ[3]	489 776	486 047	483 261	-0.6
Other Europe					
Sawnwood	m^3	19 084	18 325	19 545	6.7
Wood-based panels	m^3	10 796	10 312	12 085	17.2
Paper and paperboard	m.t.	9 914	10 205	10 322	1.1
Total	m^3 EQ[3]	81 415	80 414	85 599	6.4
Russian Federation					
Sawnwood	m^3	12 257	13 315	12 996	-2.4
Wood-based panels	m^3	3 693	4 199	4 649	10.7
Paper and paperboard	m.t.	3 415	3 773	4 076	8.0
Total	m^3 EQ[3]	37 095	40 812	42 050	3.0
North America					
Sawnwood	m^3	136 083	129 459	139 247	7.6
Wood-based panels	m^3	61 538	56 763	59 470	4.8
Paper and paperboard	m.t.	102 803	97 731	98 308	0.6
Total	m^3 EQ[3]	664 697	629 263	651 212	3.5
UNECE region					
Sawnwood	m^3	260 152	251 231	262 190	4.4
Wood-based panels	m^3	121 140	116 006	119 852	3.3
Paper and paperboard	m.t.	195 550	191 433	191 993	0.3
Total	m^3 EQ[3]	1 272 983	1 236 536	1 262 121	2.1

Notes: [1] Excluding sleepers. [2] Excluding veneer sheets. [3] Equivalent of wood in the rough: 1 m^3 of sawnwood and wood-based panels = 1.6 m^3 and 1 m.t. paper = 3.4 m^3

Source: UNECE/FAO TIMBER database 2003.

Oversupply, notably of roundwood, but also some panels and commodity sawnwood assortments, leading to weak price development, is threatening sustainable forest management in some parts of Europe, and calls for a policy response from governments, perhaps through rural development, wood promotion and payment for non-market services.

Wood promotion policies are having a beneficial effect by raising demand for wood products in the UNECE region. Demand for wood products has grown in some target markets, and substitution by metals and plastics has slowed in some sectors, such as in modern wood-framed windows maintaining market share in some countries.

1.1.3 *Construction market demand and economic factors affecting markets*

Despite weak economic conditions in North America, residential housing construction continued at high levels in 2002 through mid-2003. A combination of extremely low mortgage rates, combined with loss of confidence in other investments, resulted in nearly 2 million housing starts, the vast majority of which are wood. Progressively larger volumes of wood are needed per house as they grow in size.

In step with weak economic growth in Europe, 2002 was a year of stagnation for the construction sector, which suffered from a lack of investor confidence. Most of the weakness occurred in new residential construction, while repair and remodelling showed some improvement over 2001. Concurrent with economic growth forecasts, Euroconstruct expects small improvements in construction spending through 2004, with no substantial improvement expected until 2005. Economic weakness has pervaded all EU/EFTA's forest products market performance.

CEECs and the CIS had higher economic growth rates than western Europe, and forecasts indicate that growth will remain higher in the short term. Residential construction nevertheless remained subdued, and forecasts for improvements are mostly for non-residential, and therefore non-wood-based, construction. Consumption of some wood products is increasing for other purposes, such as packaging and furniture.

1.1.4 *Wood raw material markets*

Roundwood removals (production) recovered to near record levels in the UNECE region in 2002 commensurate with demand for sawnwood, panels and paper. While CIS roundwood removals have not returned to former levels due to continued soft domestic consumption, exports climbed by 14%, reaching record levels, with strong demand from the EU/EFTA, and increasing shipments to Asia, notably China. Roundwood removals in the Other Europe subregion (basically the CEECs) were at record levels in 2002. Consumption within the subregion, also at a record high level, took over 90% of production. Despite stronger demand, roundwood prices generally remained weak in 2002 and 2003.

In the EU/EFTA, it appears that the oversupply from the 1999 storms, which felled 200 million m^3, the equivalent of a year's harvest in the affected countries, has finally been absorbed by the market. Nevertheless, the damage from the storms will take a rotation to restore, and in the case of some massive hardwoods which were felled in France, Germany and Switzerland, that could mean 100 years. Meanwhile, in the short term, storm damage salvage and replanting has not been completed, at least in France, although the original policy intent was to provide more financial and other assistance measures to forest landowners and managers.

Fuelwood accounts for 15% of total roundwood removals in the UNECE region. Consumption rose in EU/EFTA to a record level of 32.1 million m^3 in 2002. The European Union (EU) is preparing new renewable energy policies, and there are individual country initiatives to boost wood energy.

Increased use of wood fuel for energy production is controversial today. Forest owners and managers favour it as a new market for pre-commercial thinnings and harvesting residues. Wood energy markets are being strengthened, along with international trade of biofuels, especially for processed fuels such as pellets. However, as some fuelwood can also be the primary raw material for manufacturing pulp and panels, those industries fear rising prices concurrent with reduced availability. This current situation illustrates that even within the forest and forest industries sector, a policy promoting one aspect may have unexpected and even negative consequences for another.

1.1.5 *Sawnwood markets*

Sawn softwood and hardwood have different end uses, and in the last year, 2002, exhibited divergent trends. For the region as a whole, sawn softwood consumption, production and trade overcame the downturn in 2001 and rose to record levels. In contrast, hardwood demand peaked in 1999 and has been falling since. Only in the Other Europe subregion were records set for production and exports of sawn hardwood in 2002. Region-wide, consumption of sawn softwood is roughly 5 times that of hardwood, and their uses are typically different, with some notable exceptions, such as shipping pallets.

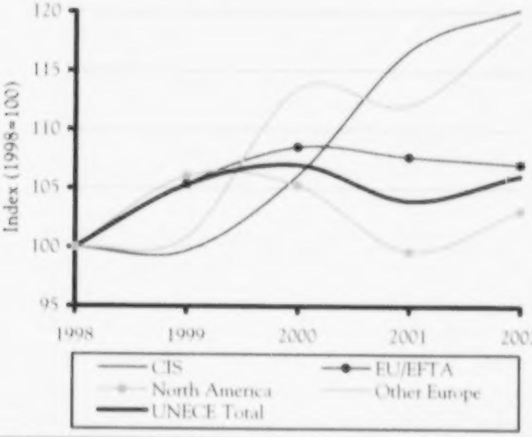
Sawnwood provides a good example of the trend towards recovery from the economic and political transition period in the CIS and Other Europe that began in 1991. Russian sawnwood exports have recovered, as evidenced by the record level in 2002 of 19.4 m^3. However, economic recovery appears incomplete, as domestic demand for Russian sawnwood decreased slightly in 2002; but at 10.8 million m^3, it is but half of peak production and consumption levels in 1989. In contrast, sawn softwood apparent consumption has gradually, but not steadily, risen in Other Europe; but at 13.5 million m^3 in 2002, it is far from its 1978 peak of 20.4 million m^3. Exports of sawn softwood from Other Europe have also been rising, but peaked in 2000, with a partial recovery in 2002. In sum, exports in the CIS and Other Europe have essentially recovered to former (i.e. pre-transition) levels, although apparent consumption has not in most countries, as is the case with panels and paper (graph 1.1.2).

In contrast, in the EU/EFTA, apparent consumption of sawn softwood is at high levels, near the 2000 peak. Sawn hardwood consumption however, was rising back from its 1979 peak through 2000, but has since declined.

North American sawn softwood consumption rose back to overcome the previous year's weakened demand, but is far from late 1980s levels. United States imports are at record levels, both from Canada and offshore, which has led to trade disputes. Sawn hardwood consumption peaked in 1999, and despite demand for new housing-related furniture, cabinetry, millwork and flooring, domestic production has slowed and imports exhibited a rise in 2002. A growing part of the United States demand for hardwood products is being met from offshore imports of semi-finished and finished value-added wood products, sometimes manufactured from North American species imported in log form, then re-exported. This has caused a change in the hardwood industry, and especially the furniture industry, with companies closing their production facilities, but remaining in business by using their domestic marketing networks, combined with imports from Canada, Mexico and offshore.

GRAPH 1.1.2

Apparent consumption of forest products in the UNECE region, 1998-2002



Note: Forest products include sawnwood, panels, paper and paperboard.
Source: UNECE/FAO TIMBER database, 2003.

In terms of tropical sawnwood, China consolidated its position as the world's largest importer, as is the case with tropical logs. China imports approximately half of all tropical sawnwood, and volumes have been growing annually. This trend contrasts with EU imports of tropical sawnwood, which fell again, by 8%, in 2002. In 2003, higher fuel prices led to increases in freight rates, and, combined with currency fluctuations, the tropical timber market slowed. The controversy over illegal logging in Indonesia also affected the trade and led the ITTO to promote phased approaches to certification and to conclude that tropical timber products will increasingly bear certificates of legality and sustainability.

1.1.6 *Panel markets*

Wood-based panels consumption in the UNECE region bounced back from a downturn in 2001, almost completely recovering region-wide. Other Europe and the Russian Federation marked record exports, and the Other Europe subregion also reported record production, consumption and imports. The EU/EFTA's record level production in 2002 went increasingly to export markets as consumption fell within the subregion. The high dollar, coupled with strong housing construction, resulted in record panel imports by the United States, mainly for construction grade panels.

Increasing panel production capacity in the UNECE region, despite increased consumption over 2001, has resulted in lower prices in North America, and weak prices in Europe. Profitability in the panel sector continues to come from cost-cutting measures, restructuring and consolidation. In Europe, the competition for small-diameter roundwood and residues from a growing wood energy demand, has led the European Panel Federation to express its strong concern about rising raw material prices and future availability.

1.1.7 *Paper, paperboard and woodpulp markets*

Trends in the UNECE subregions were divergent in 2002 for paper, paperboard and woodpulp markets. Russian exports of paper and paperboard surged to record levels, although production and consumption, while growing, remain at half their prior maximum levels in the former USSR. Other Europe marked records in 2002 for consumption, production and trade. Normally, growth in GDP and pulp and paper consumption is correlated, and this was the case in both Russia and Other Europe.

However, EU/EFTA subregion consumption moved slightly downward, the opposite direction to GDP. Nevertheless, production nearly recovered to the record levels of 2000. Currency exchange fluctuations constrained prices in euros, and prices of key commodities, such as newsprint, remain weak. As in the panel sector, the European paper industry, through the Confederation of European Paper Industries, is concerned about the availability and affordability of its raw material in the light of certain government and EU proposals to promote wood energy, carbon sequestration in forests, and nature-oriented forest management.

In North America, an upturn in 2002, following a cataclysmic drop in 2001 from the previous year's record levels, was apparently short-lived in the United States. Canadian production was faring better in early 2003, even though the Canadian dollar's appreciation offset some competitive advantages (as was the case in the EU/EFTA subregion with the euros appreciation). In order to produce enough paper and paperboard with specified quantities of recycled content, the United States now imports recovered paper, after being a major exporter for many years. As a partial consequence, a pulpwood oversupply situation has developed, pulpwood stumpage prices have fallen since their 1997 peaks, timberland values have fallen over the last decade, and forest products companies are divesting their forestlands (although increased recycling is by no means the only cause of this situation).

1.1.8 *Certified forest products markets*

Certification of sustainable forest management has been in existence for 10 years. The area of certified forests in the world has further grown over the last year, reaching over 150 million hectares by mid-2003. Approximately 90% of the world's certified forest area is in the UNECE region, with 40% of the existing forest area in Europe certified, compared with 18% of North American forests and less than 0.5% in Russia.[5]

Growth in demand for certified forest products lags behind supply, as awareness of certification by the final consumer remains weak. Nevertheless, business-to-business demand, especially from environmentally conscious retailers, is growing. Despite being a small percentage of the trade of forest products, certified forest products are a vocal and visible side of the market. Some national and sub-national Governments have put references to ensuring wood purchased comes from sustainable sources in public procurement policies.

An estimated 270 million m^3 of certified roundwood could be available annually in the UNECE region — the equivalent of 20% of consumption. However, absence of chain-of-custody (CoC) certificates results in most roundwood from certified forests, and its products after conversion, being sold without labels proving certification. Nevertheless, the number of CoC certificates has developed dramatically in the past year.

Forest industries and some Governments are concerned that competition between certification systems could be harming the image of forest products in general by confusing consumers, thus actually discouraging the sound use of wood. Some major certification systems lack mutual recognition with other major systems in the UNECE region, leading some forest owners to certify their forests by multiple systems.

1.1.9 *Value-added forest products markets*

The economic incentive to diversify from commodity products has driven companies to diversify into secondary processing. CEECs and tropical developing countries are producing more furniture, joinery and millwork in order to achieve new markets and higher profits. Nevertheless, Italy is still the dominant furniture exporter, and other developed countries also have large market shares. Government policies, such as investment incentives for new value-added forest products plants, have encouraged developments in finished and semi-finished products. *While imports of some assortments of value-added wood* products slowed in 2001, engineered wood products production and consumption grew phenomenally in North America, comprising 5% of structural lumber demand.

1.2 Trends in 2003 and 2004

Forest products market developments and forecasts were discussed at the annual UNECE Timber Committee Market Discussions on 7 and 8 October 2003 in Geneva. The discussions were based on the draft of this *Forest Products Annual Market Analysis 2002-2004*, countries' forecasts for forest products production, trade and consumption in 2003 and 2004, countries' market statements and expert presentations[6]. The theme of the discussions was the market effects of wood energy policies, and the formal market discussions were preceded by a "Policy forum: Forests, Wood and Energy". Based on all these inputs to the discussions, the Committee adopted a formal market statement, which is the body of the traditional post-Committee press release on forest product market forecasts, and which is cited throughout this section.

At the Timber Committee Market Discussions, forest products markets in the UNECE region were forecast to remain at high volumes in 2003, although oversupply appeared in several sectors. The outlook for 2004 in the region is divided between east and west, with western Europe and North America forecasting slower growth owing to uncertainty about economic conditions, but remaining at high levels. In contrast, Russia and the CEECs forecasted stronger market developments, benefiting from high GDP growth, availability of wood raw materials, low labour costs and favourable government policies creating a climate for international investment. North American wood products demand is high as a result of strong United States housing construction. Western Europe is currently experiencing weakness in housing construction and associated demand for wooden furnishings and millwork, although some optimism was expressed for 2004.

Apparent consumption of forest products in the UNECE region is forecast to increase in 2003 and 2004, recovering the levels of 2000 (graph 1.2.1). Region-wide the growth of consumption is forecast to be slow in 2003, by 0.5%, and again in 2004, by 0.7%, due to a combination of factors including economic weakness in the largest economies and forest products consumption already at high current rates (table 1.2.1). The region-wide consumption is bolstered by fastest growth, although at lower volumes, in the CEECs (up 3 and 2% in 2003 and 2004 respectively) and Russia (up 7 and 5% in 2003 and 2004 respectively). The momentum of the large

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[5] The reference area is based on the UNECE/FAO *Temperate and Boreal Forest Resources Assessment 2000* data for forest area, excluding other wooded land (forest area in Europe excludes CIS countries).

[6] See 1.3 References for sources and links to websites.

TABLE 1.2.1

Apparent consumption of sawnwood[1], wood-based panels[2] and paper and paperboard forecast in the UNECE region, 2002-2004

	Thousand	2002	2003	Change 2002 to 2003 %	2004	Change 2003 to 2004 %
EU/EFTA						
Sawnwood [1]	m^3	89 562	90 418	1.0	90 431	0.0
Wood-based panels [2]	m^3	42 438	41 280	-2.7	41 619	0.8
Paper and paperboard	m.t.	80 441	82 051	2.0	82 906	1.0
Total	m^3 EQ [3]	483 894	488 871	1.0	492 331	0.7
Other Europe						
Sawnwood [1]	m^3	19 629	20 147	2.6	20 534	1.9
Wood-based panels [2]	m^3	12 087	12 766	5.6	13 171	3.2
Paper and paperboard	m.t.	9 746	9 968	2.3	10 199	2.3
Total	m^3 EQ [3]	83 785	86 452	3.2	88 501	2.4
Russian Federation						
Sawnwood [1]	m^3	10 187	10 417	2.3	10 517	1.0
Wood-based panels [2]	m^3	4 588	5 252	14.5	5 695	8.4
Paper and paperboard	m.t.	4 204	4 570	8.7	4 880	6.8
Total	m^3 EQ [3]	37 892	40 563	7.0	42 482	4.7
North America						
Sawnwood [1]	m^3	143 082	141 454	-1.1	142 558	0.8
Wood-based panels [2]	m^3	60 560	59 868	-1.1	60 010	0.2
Paper and paperboard	m.t.	98 308	98 392	0.1	98 270	-0.1
Total	m^3 EQ [3]	659 093	655 663	-0.5	657 244	0.2
UNECE region						
Sawnwood [1]	m^3	262 461	262 435	0.0	264 040	0.6
Wood-based panels [2]	m^3	119 673	119 166	-0.4	120 495	1.1
Paper and paperboard	m.t.	192 699	194 981	1.2	196 254	0.7
Total	m^3 EQ [3]	1 264 664	1 271 549	0.5	1 280 558	0.7

Notes: [1] Excluding sleepers. [2] Excluding veneer sheets. [3] Equivalent of wood in the rough: 1 m^3 of sawnwood and wood-based panels=1.6 m^3, 1.m.t. paper = 3.39 m^3.

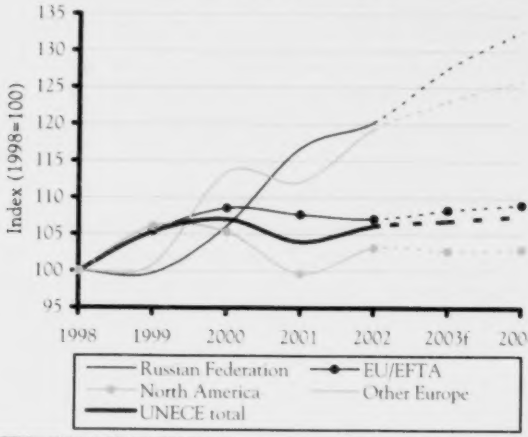
Source: Forecasts made at UNECE Timber Committee, October 2003.

volume and value of consumption in North America and western Europe should overcome the weakness in 2001, and continue its slow, steady rise, especially in 2004.

Improved forest products consumption in the CEECs has in some sectors, for example panels, achieved full recovery to pre-transition levels. However, consumption of other primary processed products, for example sawnwood, has not regained volumes consumed in the 70s and 80s. Nevertheless, forecasts for 2004 consumption in the CEECs and Russia are positive, and are in line with economic recovery.

GRAPH 1.2.1

Apparent consumption of forest products in the UNECE region, 1998-2004

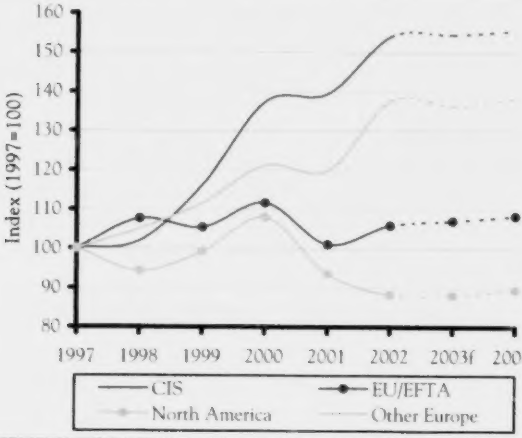


Notes: Forest products include sawnwood, panels, paper and paperboard. f = Timber Committee's forecast trends for 2003 and 2004, made at the October 2003 session, were applied to the 2002 figure.

Sources: UNECE/FAO TIMBER database, 2003, and Timber Committee forecasts, 2003.

GRAPH 1.2.2

Exports of primary-processed wood products in the UNECE region, 1997-2004



Notes: Primary-processed wood products include sawnwood, panels, paper and paperboard, woodpulp and roundwood. f = Timber Committee's forecast trends for 2003 and 2004, made at the October 2003 session, were applied to the 2002 figure. Forecast for CIS includes only Russian Federation.

Sources: UNECE/FAO TIMBER database, 2003, and Timber Committee forecasts, 2003.

Exports of primary processed forest products are forecast to increase in the UNECE region in 2004 (graph 1.2.2). The rapid increase in exports over the past five years from the CEECs and Russia are forecast to level out, in some products as full manufacturing capacity is achieved. According to country reports produced for the Committee's session, foreign investment in these countries, from Europe, North America and Asia, should boost capacity in the coming years, and exports too. North American exports, of which the majority are within the continent between Canada and the United States, are forecast to increase on the basis of improved offshore markets for Canada. During the Committee's Market Discussions, the possibility of North America becoming a net importer of sawn softwood was mentioned, but not until after 2004. Western European exports are also forecast to improve in 2003 and 2004, but will not regain the spike in 2000 brought on by the heavy windthrow in the December 1999 storms, which felled the equivalent of a year's harvest.

Before analysing the forecasts for 2003 and 2004, this section covers two main policy issues brought out at the Timber Committee session: forest law enforcement, governance and trade (FLEGT) and wood energy. Both of these issues are the subject of fuller discussion in chapter 2, "Policy implications of forest products market developments in 2002 and 2003".

1.2.1 Forest law enforcement, governance and trade

Based upon presentation of an expert paper[7] the Committee discussed FLEGT, at present the main issue in the forest sector. It adopted the following passage within its market statement:

"FLEGT" is at present the main issue in the forest sector and the Committee's annual Market Discussions provided a forum for a multi-stakeholder discussion. Illegal logging denies revenues to governments, industries and forest owners, puts downward pressure on forest products prices, negatively affects workers and compromises sustainable forest management. The Committee wants to work together with other organizations to determine the extent and causes of illegal logging and trade."

More information on FLEGT appears in chapter 2 and in another post-Committee press release titled, "Illegal logging and wood energy: UNECE Timber Committee discusses policy issues of the day"[8].

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[7] "Illegal logging and illegal activities in the forest sector: Overview and possible issues for the UNECE Timber Committee and the FAO European Forestry Commission" by Mr. Carl-Éric Guertin. www.unece.org/trade/timber/docs/tc-sessions/tc-61/presentations/item-3.htm

[8] Policy press release at: www.unece.org/trade/timber/press.htm

1.2.2 Wood energy policies

Based upon presentation of an expert paper[9], and viewpoints of different contingencies within the forest and forest products sector[10], the Committee discussed wood energy and governments' policies to promote use of forest and forest industry residues and by-products as renewable energy sources and it adopted the following passage in its market statement:

"Wood-based energy has been and is being promoted by governments and forest owners throughout Europe as a means to improve forest viability, provide rural employment, promote renewable resources and reduce CO^2 emissions from fossil fuels, and thereby mitigate climate change. In treating this topical issue, the Committee felt wood energy should be promoted by governments, noting an excess of growth over removals in the region's forests, while acknowledging the concern of some industry sectors for raw material competition."

More information on wood energy polices appears in chapter 2 and in the press release titled, "Illegal logging and wood energy: UNECE Timber Committee discusses policy issues of the day".

1.2.3 Economic overview

The annual Market Discussions begin with an overview of macro-economic developments affecting forest products markets. Based on an expert presentation in October 2003, the Committee adopted the following statement:

"Global activity picked up in 2003 after a pronounced cyclical downturn. North America remains the main engine of growth, although there are persistent concerns about the ability of the United States to increase growth, in view of developments regarding interest rates, unemployment, trade and budget deficits, and exchange rates. Most western European countries show continued stagnation while eastern Europe and the CIS have demonstrated strong resilience to the weakening of the growth forces in western Europe. The United States housing market remains strong although long-term interest rates have edged up. The euro has appreciated against both the dollar and the yen. GDP growth in North America in 2003 will be about 2.6%, compared to 1.0% for western Europe. Stronger growth is expected for 2004: 3.8% for North America and 2.1% for western Europe. GDP in eastern Europe is expected to grow by 3.6% in 2003 and 4.4% in 2004, while in the CIS, the corresponding growth rates are 6.2 and 5.1%. There remain however downside risks, related to the robustness of United States consumer spending, the consequences of the stronger euro, persistently high oil prices and the impact of the United States' large current account deficit."

1.2.4 Wood raw materials

The Committee's official market statement forecasts:

"In the UNECE region, roundwood removals are expected to grow in the period from 2002 to 2004. The highest growth, of 2.0%, is forecast for the CIS subregion. For the first time in 2004 consumption is expected to increase faster than production, by 4.1% annually. Roundwood exports are expected to stop growing, after continuous growth since 1996. While the majority of these exports are legal, some come partly from illegal logging. There is an increasing concern that illegal logging is affecting global forest products markets. The lack of verifiable information makes it difficult to provide more robust analysis of the situation. There is a need for much better information on the extent of illegal logging.

Removals in western Europe are growing by 1.5% per year. This rather high growth is likely to be related to recovery to normal levels, after extraordinary removals in 2000, caused by the storm damage, followed by reduced fellings during 2001 and 2002. The growth of removals in central and eastern Europe is low at 0.2% per year. The only downward trend is forecast for North America, the biggest producer and consumer of roundwood, with an annual decrease of 0.5% in 2002 to 2004. Timber harvests from the United States National Forests continued to decline, but at a lower rate than in earlier years. Russia remains the biggest exporter of roundwood, while western Europe is expected to remain the biggest importer in the UNECE region. The trade surplus for roundwood in North America declined for the fifth consecutive year.

During the discussion, it was highlighted that raw material costs for sawmills and pulp mills had been falling in many subregions. There are two main reasons for this: oversupply of roundwood and wood chips, and lower market prices for manufactured forest products. However, an opposite trend was observed in some cases in central and eastern Europe. Roundwood exports from Russia to western Europe as well as to Asian markets are expected to remain on a high level or even to increase further through 2004, while there is a policy intention to develop wood processing and increase export of end use products.

Wood represented about 6% of the total EU primary energy production in 2000, and almost 15% of the total roundwood removals in the UNECE were used as fuelwood in 2002, mostly in CIS. The Committee noted that further analysis of the use of wood for energy purposes requires more robust data and information. In some countries, weak demand has led to accumulation of growing stock in over mature stands, some of which are showing signs of instability. Stimulation of new demand, for instance for wood fuel, would help to resolve this situation.

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[9] Trends and effects of wood energy policies" by Dr. Bengt Hillring. www.unece.org/trade/timber/docs/tc-sessions/tc-61/presentations/item-3.htm

[10] Expert presentations at: www.unece.org/trade/timber/docs/tc-sessions/tc-61/presentations/item-3.htm

The hot, dry summer of 2003 influenced roundwood markets: several countries reported forest damage, notably insect infestations and fires, due to the weather conditions. Market stabilisation measures were being taken in a few areas."

1.2.5 Sawn softwood

The Timber Committee adopted the following passage in its market statement:

"Sawn softwood markets are forecast to remain steady at high volumes in both Europe and North America in 2003 and 2004. Sawn softwood demand from the extraordinarily strong United States housing market, at 1.7 million houses annually, continued to drive not only imports from the traditional supplier, Canada, but also from other countries. Globalization is transforming sawnwood trade. The United States is increasing imports of sawnwood, and further-processed sawnwood products, both from within the UNECE region, but also from outside, for example plantation-grown softwood from the southern hemisphere.

United States imports from Canada continue to be subject to the 27% duty imposed following the end of the Softwood Lumber Agreement. It was noted that trade disturbances such as the United States anti-dumping and countervailing duties on Canadian sawn softwood have underlying impacts such as the transfer of trade to other countries. Such formal trade actions can lead to fundamental changes such as increases in manufacturing efficiency. Canada forecast a 4% increase in exports in 2004 to reach 36 million m^3, overcoming a forecast dip in 2003. Most of these increases will be to offshore markets, particularly in Asia.

Despite the weak United States dollar in 2003, offshore exporters were able to expand their share of the United States market. As was the case for Europe in 1993, North America's increasing imports could turn the subregion into a net importer in the near future. Sawnwood prices in North America have been weak in an oversupply situation, but some strengthening in prices is evident in Europe. Russian sawnwood prices remain below western prices, but sawmills in Russia are economically viable because of low labour costs.

The Timber Committee discussion included policies promoting the sawn softwood sector. The Russian sawmilling sector development is benefiting from favourable government policies which have also created the conditions for increasing international investment that will add another 1 million m^3 in production capacity. Russian sawn softwood exports are forecast to grow by 5% in 2003 and again by 6% in 2004 confirming recovery of the sector's exports to levels greater than the former USSR. Growth has been strongest for exports to non-UNECE region countries, especially China, which doubled its sawnwood imports from Russia between 2000 and 2002, and to other CIS countries, which have now regained levels of the former USSR, and become, as a group, Russia's most important export destination. Policies are being developed to promote increased domestic consumption of sawnwood in housing and industrial construction. Some Russian sawmills envisage their residues will be increasingly used for energy production, both within the country and also in western Europe due to government policies promoting renewable energies.

The sawn softwood market in western Europe in 2003 suffers from economic stagnation resulting in weak markets for housing, furnishings and millwork. Appreciation of the euro against the dollar and the yen, increasing production from lower cost producing countries (notably in eastern Europe and the CIS), have led to an oversupply situation. However, a modest turnaround is anticipated in 2004. Sawnwood prices have risen and appear to be strengthening.

The CEECs continue to be net exporters of sawn softwood, but at a lower level, due to increased domestic consumption. In 2003 and 2004, the Russian sawmilling sector forecast robust growth in light of favourable economic conditions, mobilization of vast supplies of wood raw materials and low labour costs.

In the United States, the heretofore exceptionally strong house construction market could weaken slightly in 2004, reducing the demand from the record levels in 2003. Regardless whether the strong dollar persists, imports of sawn softwood and further-processed products are forecast to increase, especially as long as the present level of United States tariffs on Canadian sawnwood imports is maintained."

1.2.6 Sawn hardwood

The official Committee market statement contains the following paragraphs on sawn hardwood markets:

"Sawn hardwood markets in the UNECE region are forecast to remain steady overall in the UNECE region in 2003 and 2004. In Europe a furniture crisis occurred in 2002: growth in furniture demand stopped, leading to a drop in sawn hardwood demand. Throughout the UNECE region, increasing imports of furniture from outside the region are displacing domestic production, negatively affecting both sawnwood and panels demand. For example, China has quickly risen to become the second largest furniture exporter in the world behind Italy. The acceleration of trade in hardwood dimension (cut-to-size and defect-free parts) is displacing some sawnwood trade, which is a positive development when it maintains hardwood demand.

Romanian production and exports of sawn hardwood were forecast to accelerate in 2003 and 2004 in contrast to more subdued forecasts for other countries. Exports of sawn hardwood are forecast to expand by 23% in 2004, confirming Romania as Europe's largest sawn hardwood exporter. Government policies have opened Romania to foreign investment. In addition, policies now promote exports, especially of sawnwood, panels and value-added products such as furniture.

Oak is once again becoming fashionable in Europe, along with other "dark" species, such as cherry. In discussion, the Committee felt the renewed interest in oak was in part due to successful promotional campaigns, such as "*J'ai choisi le chêne.*" (I chose oak) in France.

In Europe, despite the lack of public awareness, the business-to-business demand for sawn hardwood that is certified as coming from sustainably managed forests is growing, however the availability of supply is not keeping abreast of demand. Reasons include: chain-of-custody problems, lack of a price premium, issues related to indigenous rights, etc. Tropical hardwoods have difficulty achieving certification in part due to small-sized holdings. Tropical forests are often seen as sources of illegal logging, but some of the allegations made appear to arise because of inadequate national accounting of production and exports."

1.2.7 Panels markets

Concerning panels markets, the Committee adopted the following statement:

"Consumption of wood-based panels (plywood, particle board, OSB and fibreboard) in Europe in 2002 attained a new record level of 54.1 million m^3, slightly higher than in 2001. This result was due to the positive development of the sector in the central and eastern European countries, where consumption increased by 17.4%, while it fell by 2.3% in western Europe. The Committee forecast for 2003 a drop in consumption of 1.9% in Europe as a whole. A slight recovery is expected in 2004. In the Russian Federation, consumption in 2002 increased by 10.7% to a record 4.7 million m^3. This trend is forecast to continue in 2003 by 13.2% and in 2004 by 7.8%. In North America thanks to the continued strong construction sector, consumption went up by 4.7% in 2002 but is expected to fall slightly in 2003, by 0.8% to 60 million m^3 and remain at his level in 2004.

The discussion which followed showed that prospects for an economic recovery had been deferred at least until 2004. However, production remained at high levels of output but the industry was facing short-term overcapacity and low prices. Rationalisation had been taking place in the less competitive plants while capacity expansions at the scale of the last decade seemed to be over. There are still prospects for technology improvements, better product quality, higher value added products and enhanced service.

For all panel types, the European manufacturers are worried about the increase in raw material costs. In particular, they feel that the availability of supplies of raw material for panels is coming under increased pressure because of the policy in many countries to promote the use of wood for energy. It was pointed out that the panels industry performed a valuable ecological function in utilizing low-quality wood, recycled wood and wood residues."

1.2.8 Paper, paperboard and woodpulp

The Committee adopted the following statement regarding this market sector:

"European consumption of paper and paperboard is expected to expand by 1.9% to 92 million m.t. in 2003 and a further 1.1% to 93 million m.t. in 2004, both record levels, with similar rates of growth for production and rather faster growth for trade. Russian consumption will grow faster, by nearly 9% in 2003 and 7% in 2004, as *per caput* consumption levels converge on those of Europe and North America. In North America however, consumption of paper and paperboard, at just over 98 million m.t. in 2002 was well below the records attained in 1999 and 2000, and is not expected to expand significantly in the medium term. This reflects some structural changes in the economy, such as the shift from manufacturing to services and weakness of advertising in paper-based media, as well as overcapacity in the sector.

Despite rising production of paper and paperboard, consumption of woodpulp is expected to stagnate or decline in Europe and North America. In Europe, woodpulp now accounts for less than half the raw material used for paper and paperboard production, as the use of recovered paper expands rapidly. This trend is expected to continue, as it is in line with policy objectives and the commitments of the industry to develop recycling. It was pointed out that that the pulp and paper sector is the largest producer and user of wood energy.

In Russia, production and exports of woodpulp will expand in 2003 and 2004. Exports will grow by over 3% in 2003 and a further 2.6% in 2004, to reach 2 million m.t., out of total production of nearly 6.8 million m.t."

1.2.9 Certified forest products

The Committee adopted the following statement after discussion on certification of sustainable forest management and markets for certified forest products:

"Certification of sustainable forest management was discussed as a means of ensuring the source of wood products, however currently a lack of chain-of-custody documentation is an obstacle to bringing the growing volume of certified forest products to market with an identifying label. The area of certified forestland has grown to approximately 160 million hectares worldwide, under specific forest certification schemes, of which most is in the UNECE region. In environmentally-conscious markets, certified forest products are gaining recognition, but mainly at the business-to-business level. Public procurement policies, in favour of wood products originating from sustainably managed forests may become important drivers, e.g. in Germany, Denmark, Netherlands and the United Kingdom. The lack of a price premium for certified forest products and of comprehensive mutual recognition of certification schemes remain outstanding concerns."

1.3 References

Country market statements to the UNECE Timber Committee Market Discussions, Geneva, Switzerland, 2003, www.unece.org/trade/timber/mis/market/market-61/market-61.htm.

Expert presentations to the UNECE Timber Committee Market Discussions, Geneva, Switzerland, 2003, www.unece.org/trade/timber/docs/tc-sessions/tc-61/presentations/item-3.htm.

Illegal logging and wood energy: UNECE Timber Committee discusses policy issues of the day, UNECE press release, www.unece.org/trade/timber/press.htm.

Recovery of forest products markets in the UNECE region in 2003 amid concerns for overcapacity in short term, UNECE note for the press, www.unece.org/trade/timber/press.htm.

UNECE Timber Committee Statement on Forest Products Markets in 2003 and Prospects for 2004.

UNECE/FAO TIMBER database, www.unece.org/trade/timber/mis/fp-stats.htm.

UNECE Timber Committee market forecasts, www.unece.org/trade/timber/mis/forecasts.htm.

1.4 Electronic annex tables for website only

1.4.1 Europe: Summary table of market forecasts for 2003 and 2004.

1.4.2 North America: Summary table of market forecasts for 2003 and 2004.

1.4.3 Russian Federation: Summary table of market forecasts for 2003 and 2004.

Chapter 2

Policy implications of forest products market developments in 2002 and 2003

Highlights

- Trade in wood products derived from illegal logging, both inside and outside the UNECE region, is receiving increasing policy attention as illegal logging is seen as one cause of deforestation and a negative influence on world markets for products from legally and sustainably managed forest operations.
- Certified forestland area has increased rapidly, although volumes of certified products reaching the consumer are low, posing a policy dilemma about governments' support for certification systems.
- Structural oversupply of roundwood and some commodity sawnwood and panels, is leading to weak price development, and threatening sustainable forest management in some parts of Europe: this urgently calls for a policy response from Governments.
- Energy markets and international biofuel trade are developing rapidly as countries promote renewable energy sources; however, pulp and panel manufacturers are expressing concern for raw material availability and affordability.
- Climate change policies could have significant consequences in the long term for wood supply and for the market position of forest products.
- Changes in trade policy, such as removal of tariff and non-tariff barriers and new relationships between trade and environment policies could significantly influence trade patterns for forest products.
- Trade tensions between Canada and the United States led to duties and quotas intended to reduce the growth in the Canadian share of the United States sawn softwood market, however they have had the opposite effect.
- There is increasing appreciation of the importance of developing policies for the sound use of wood, alongside those for sustainable forest management, wood promotion and building codes.

Introduction

For the first time, the policy dimension dominates *Forest Products Annual Market Analysis*: policy issues arising from market developments and the impact of policies for the forest sector and for other sectors on forest products markets. This chapter focuses on policy, while other chapters complement the market analysis by descriptions of policies influencing each timber market sector. In this chapter, key policy issues currently impacting forest products markets in the UNECE region are described.

All the issues addressed are complex, and different actors, (e.g. countries, industries, forest owners) have widely differing interests and opinions. Some of the issues are the subject of international negotiating processes. The secretariat has tried to present the issues briefly but comprehensively, and in a balanced and fair way: however, in the space available, this has been difficult, and some aspects may have been neglected or distorted.

In the annual Timber Committee Market Discussions, different market actors are represented, including Governments, industries, trade associations and non-governmental organizations. The final version of this chapter takes into account the discussions at the Timber Committee session, but is not an official record of these discussions

2.1 Chapter overview

Policies affect forest products markets and *vice versa;* forest products market developments impact policies. Forest products markets are not only affected by traditional market forces, but are increasingly influenced by government policies. The sector has never operated in a vacuum, but there is an increasing realization that as policies are influencing the production, trade and consumption of forest products, they should be explicitly considered in analysis.

This chapter focuses on the most topical policy issues related to forests, trade and markets:

2.2 Forest law enforcement, governance and trade
2.3 Evolution of policy for certification of sustainable forest management
2.4 Policies for sound use of wood, wood promotion and building codes
2.5 Industrial development policies and structural oversupply
2.6 Climate change policy
2.7 Wood energy promotion policy
2.8 Trade policy, tariff and non-tariff barriers.

This analysis will not focus on general macro-economic policy, for example, management of the business cycle or of exchange rates, although these undoubtedly influence strongly forest products trade flows.

Other overarching questions relating to all of the policy issues below are what the role of government should be beyond creating the economic environment for economic actors to pursue their interests, and whether steps taken or being considered by Governments are actually correctly focused on the root causes of the problems. However, these aspects are not considered in depth here.

2.2 Forest law enforcement, governance and trade

The most prominent group of policy issues that affects forest products markets, which is currently being discussed in international and national forums, is forest law enforcement, governance and trade (FLEGT). Governments, international and non-governmental organizations, trade associations and the industry have recognized that failures of governance and law enforcement are some of the most important causes of unsustainable forest management resulting in deforestation. These issues have been attracting considerable policy attention in recent months, not only in countries where forest law enforcement should be strengthened (including some in the UNECE region), but also in their trading partners. Trading partners can help countries with problems in these areas to resolve them by strengthening institutions and setting up wood tracking systems.

Some illegal logging has always been present, and will always exist to some extent. Certain levels of illegal cutting are customarily tolerated when its use is for home heating and cooking in rural forested areas, particularly when it does not impact sustainable management in the local area.

However, the illegal felling and trade of the resulting timber, especially when it compromises sustainable forest management, or reduces potential revenues for legally-produced wood products, has become a central issue in recent years. Illegal logging destroys forest ecosystems, robs national Governments and local communities of needed revenues, undercuts prices for legally harvested forest products on the world market, at times even finances regional conflict, and acts as a disincentive to sustainable forest management. The World Bank estimates that illegal logging results in annual losses of $10 to 15 billion in developing countries.

The United Nations system and other official forums have acknowledged the existence of illegal logging:

- FAO Committee on Forestry (COFO) in 2001 addressed illegal and corrupt activities based on research reported in the *State of the World's Forests*[11].
- UN Forum on Forests raised the subject in its 2003 session.
- FAO Advisory Committee on Paper and Wood Products discussed "Defining illegal logging: What is it, and what is being done about it?" at its 2003 session[12].
- G8 adopted an "Action Programme on Forests" in 1998 that identified five priority areas for action, including illegal logging and forests, which were on the agenda again when the G8 met in June 2003 in Evian, France.
- Within the UNECE/FAO programme, the Team of Specialists on Forest Products Markets and Marketing discussed the issue in their 2002 meeting and presented an expert paper on FLEGT at the Timber Committee Market Discussions[13].

The novel feature of recent FLEGT initiatives is their emphasis on partnership between exporting countries with governance problems and importing countries offering their help in solving these problems, naturally within the limits of national sovereignty. Probably the most important part of this international cooperation is a fairly conventional emphasis on strengthening of law enforcement institutions, such as customs, police and forest services. The trade element, whereby the importing countries, working with the authorities of the exporting countries, attempt to use trade channels as a way of reinforcing domestic law enforcement, is more complex and still experimental. Importers and public procurement agencies are urged to require certificates that wood has been produced and traded legally, a requirement which calls for sophisticated wood tracking systems and a clear definition of what is "illegal"[14]. Some trade associations and some individual companies are already being asked to prove that their wood and wood products are legally sourced, which is extremely difficult without formal systems to trace the origin of fibre from its source to its final use.

Starting in July 2003 the UN Security Council banned imports of wood products from Liberia, because revenues from timber exports by that country have increasingly been used to finance illegal arms transactions.

Acknowledged illegal logging and exports in Indonesia have led to memoranda of understanding between the Indonesian Government and importers, including China, Japan, Malaysia and the United Kingdom, as well as the European Commission. ITTO analysis supports the conclusion that a significant part of Indonesia's log exports are from illegal sources (see tropical timber chapter).

One example is the September 2002 Memorandum on jointly combating illegal forest product trade between China and Indonesia in order to cooperate in attempting to eliminate such trade ("China Forest Products Market Information", 2003)[15]. The United Kingdom Government signed a memorandum of understanding with Indonesia to address governance issues. Japan has also signed a joint action plan with Indonesia to curb illegal logging and trade, claiming that 50% of the logs exported from Indonesia are illegally harvested (*Japan Lumber Reports*, July 2003).

In July 2003 the United States announced the President's Initiative Against Illegal Logging. The reported objective is to assist developing countries in their efforts to combat such illegal logging, including the sale and export of illegally harvested timber, and fighting corruption in the forest sector. Focusing on "three critical regions" – the Congo Basin, the Amazon Basin and Central America, and South and Southeast Asia – the initiative emphasizes good governance, community-based actions, technology transfer and harnessing market forces.

The European Commission issued an "Illegal Logging Action Plan" in May 2003. The plan proposes the establishment of voluntary bilateral agreements between the EU and timber-producing countries. "Legality licences" would be created, using independent verification, to ensure the origin and legality of timber imports. However, the industry is worried about the functionality, complexity and additional costs of such measures.

In short, the last year has seen the development of far-reaching and ambitious policies concerning forest law enforcement, governance and trade, and more are being developed. The modalities, however, are so far little developed and many important aspects are still unclear. However, it is clear that the solutions found will affect not only forest law enforcement in exporting countries, but also the relative competitive position of exporters.

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[11] www.fao.org/forestry/foris/webview/forestry2/ index.jsp?geoId= 0&langId=1&siteId=3321

[12] www.fao.org/forestry/foris/ACPWP44/pdf/ITEM6a.pdf

[13] www.unece.org/trade/timber/docs/tc-sessions/tc-61/presentations/ item-3.htm

[14] For instance, should the producer or exporter be required to show that all taxes have been paid? What of legally valid concessions obtained through corruption? What of operators who wish to operate legally but cannot do so because of general levels of corruption and criminality? Who is able to supply such certificates of legality with sufficient credibility, especially if official structures or sectors within those official structures are (systemically) corrupt?

[15] "China Forest Products Market Information, January 2003, by ITTO and Tropical Forest Products Information and Consultation Center of China.

Illegal logging and its effects on forest products markets was a special topic within the annual Timber Committee Market Discussions in October 2003. The discussion was based on an expert paper entitled "Illegal Logging and Illegal Activities in the Forestry Sector: Overview and Possible Issues for the UNECE Timber Committee and FAO European Forestry Commission" by Carl-Eric Guertin, Communications Manager, Quebec Wood Export Bureau[16]. Delegates expressed concern about issues related to FLEGT and were informed of actions by being taken by Governments in the UNECE region:

- Integrated approaches against illegal logging at all levels of government, i.e. local, regional and national.
- Upgrading legislation to combat illegal logging.
- Establishing codes of conduct and standards for evaluating sustainable forest management.

Among the suggestions for actions by the Timber Committee were:

- Investigate the extent and causes of illegal logging in the UNECE region
- Clarify the concepts within FLEGT, bearing in mind the acknowledged difficulty defining illegal logging
- Analyze the effects of illegal logging on forest products markets.

In general, the delegates endorsed the policy initiatives under way, notably those outlined above, whose main features could be summarized as follows:

- Attempting to monitor and control the trade from illegal harvesting
- Establishing bilateral memorandums of understanding between trading partners
- Considering the opportunities for certification of sustainable forest management to control the source of logs and subsequent wood products
- Address the irregularities in reporting of harvests and trade.

2.3 Evolution of policy for certification of sustainable forest management

Certification of sustainable forest management is now in its 10th year of existence. The growth of certified forestland has been exponential in the UNECE region and now 40% of European forests and 18% of North American forests are certified (see Chapter 9, "Markets for Certified Forest Products, 2002-2003). There are several national and international certification systems currently operational, mostly based in the UNECE region. All are voluntary and market based. However, certified forest products remain a minor part of the forest products traded in 2003, in part because of a shortage of chain-of-custody certificates. Nevertheless, certification remains a prominent part of today's policy discussion.

More recently, in order to have greater assurance of the source of wood products, some national, regional and local Governments have developed procurement policies which take the origin of forest products into account when purchasing wood and paper products in order to promote sustainable forest management and to avoid rewarding illegal logging. In practice, this usually implies purchasing certified forest products. In Europe, countries including Demark, France, Germany, the Netherlands and the United Kingdom have announced public procurement policies that include criteria favouring the purchase of CFPs. The issue is being addressed in a European Union-wide context.

Forest industries and some Governments are concerned that competition between certification systems could be harming the image of forest products in general by confusing consumers, thus actually discouraging the sound use of wood. Several remedies have been proposed, including comparison matrices and mutual recognition of certification schemes. The Pan European Forest Certification system (PEFC) works through the mutual recognition of national schemes in its current 13 member countries. Mutual recognition exists between PEFC, the Sustainable Forestry Initiative, the American Tree Farm System and the Canadian Standards Association system. However, the Forest Stewardship Council (FSC) appears unwilling to recognize other forest certification systems[17].

As a result, market actors (forest owners, forest industries, middlemen and retailers) are faced with the dilemma of whether or not to seek forest management certification with chain-of-custody proof. Some question the economic viability and incentives of certification.

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[16] http://www.unece.org/trade/timber/docs/tc-sessions/tc-61/presentations/guertin-paper.pdf

[17] Raunetsalo, et al. "Forest Certification Update for the UNECE Region, summer 2002", UNECE/FAO *Geneva Timber and Forest Discussion Paper*, ECE/TIM/DP/25, 2002.

Others seek revenue for non-market benefits to compensate for the costs of certification. Once the decision to certify is made, the next issue is determining the appropriate certification scheme to use. How will the large numbers of small-scale producers be able to adopt certification? Forest landowner associations are one means. In central and eastern European countries (CEECs), where forestland restitution is taking place, Governments are facilitating the establishment of associations to enable forest owners to receive technical advice and assistance in managing their land sustainably. All major certification systems have developed or are developing mechanisms to address the way of certifying forests with many small private owners.

Governments are seeking the best ways to promote the sound use of wood, through certification, and supporting their domestic forest owners and industries, without favouring one scheme or another or erecting barriers to trade. Two of the schemes, FSC and PEFC with its partners, are effectively global in their scope, so these dilemmas are being repeated in a number of developing and CEECs that also have the option of developing their own national certification schemes, as is the case in Indonesia, Malaysia and some other countries.

Certified forest products markets were discussed, as usual, within the annual Timber Committee Market Discussions in October 2003. The discussion was based on a presentation by Dr. Ewald Rametsteiner, Certification Expert, Institute of Forest Sector Policy and Economics, University of Agricultural Sciences, Vienna, Austria[18]. He is the lead author of chapter 9, "Markets for Certified Forest Products, 2002-2003". Delegates expressed the following opinions about certification of sustainable forest management in the UNECE region:

- Lack of mutual recognition between all certification schemes is constraining development of the trade of certified forest products
- ISO 14000 certification of environment management systems also has a role to play.
- Establishment of chain-of-custody standards is necessary to ensure effectiveness
- Mutual recognition may prove impossible, but mutual understanding is necessary.

2.4 Policies for sound use of wood, wood promotion and building codes

"The objective of Governments, forest based industry and the forest sector as a whole should be greater, better and appropriate use of wood from sustainably managed forests in technically and economically competitive and environmentally appropriate products and systems of high quality". This was the conclusion of the Timber Committee and the European Forestry Commission seminar on "Strategies for the Sound Use of Wood", held in Romania in March 2003 (TIM/SEM.1/2003/2). Furthermore, it concluded that "Sustainable forest management is a prerequisite for sound use of wood, and sound use of wood contributes to sustainable forest management; therefore the two concepts should be treated together in policy formulation". Sound use of wood is a broad topic that also includes wood promotion and the building codes.

Promotion of wood and its export markets continues in the UNECE region; however, at different rates of funding and incentives, and with different combinations of partners (Governments, trade associations, industries, NGOs and forest owners). This topic was treated as a special chapter in last year's *Forest Products Annual Market Review, 2001-2002*, with the overall conclusion that currently multi-country wood promotion is necessary to expand wood consumption, increase market share and raise prices[19].

Many western countries have well-funded wood promotion programmes at the national, regional, state and provincial levels. In North America, the Wood Promotion Network brings together over 300 promotional organizations from both Canada and the United States to develop synergies and strategies. In Europe, the Nordic Timber Councils' joint promotional programmes provide another useful example of international cooperation. The FAO/UNECE Forest Communicators Network is yet another constructive example of international cooperation in wood and paper promotion. One of the principal problems in promotion is the fragmented nature of the wood products industry, in that companies are frequently too small to do their own promotion and cannot see the advantage for themselves in generic promotion (i.e. for wood as a whole).

Building codes can either facilitate construction with wood, or hinder and even prevent it. Wood products producers realize that favourable building and fire safety codes are essential for enabling marketing of wood. North America's experience in developing 2x4 wood-framed housing in Japan serves as a good example, as after years of market development work, half of Japanese homes are of wood construction, not only of the North American style, but also of traditional post and beam construction. Wood-framed houses fared better than concrete structures in the Kobe earthquake, which led to a heightened demand for wooden housing; however, some new Japanese building codes being enacted to promote healthier living environments could mean a setback for wood.

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[18] Presentation available at www.unece.org/trade/timber/mis/reports.htm

[19] Chapter 3 "Market effects of wood promotion", in *Forest Products Annual Market Review, 2001-2002*. http://www.unece.org/trade/timber/mis/fpamr.htm

Conversely, the liberalization of restrictive fire prevention codes opened the door for a significant increase in wood-framed construction in Switzerland according to Lignum, the umbrella network of professional organizations, especially forest- and sawmill-owners, architects and engineers. Despite the success, Lignum continues to battle for legislation and codes to enable increased market development.

Building codes that enable wood to be used more in residential and non-residential construction will help. However, only 10% of the world's current 18 million house constructions are wood-based. This small share is due not only to building codes but also more importantly to cultural differences in construction techniques and materials.

The draft policy conclusions from the ongoing European Forest Sector Outlook Study, presented to the Timber Committee, addressed, among other things, the "Need for policies to stimulate the sound use of wood"[20]. The draft EFSOS conclusion currently reads as follows:

"Wood is an ecologically friendly and renewable raw material. Governments and EU institutions should develop a policy and legislative framework to support and promote the sound use of wood as an integral part of overall sustainable development considering long-term sustainable development of forest resources. The major forest sector stakeholders should identify and implement new financial mechanisms to support these actions. This is particularly necessary in those countries where the "wood culture" is weak, which is the case in many central and eastern European countries at present, whereas renovation of historical traditions in wooden house constructions and the use of wood for energy generation could significantly contribute to this issue. Policies and resources should be devoted to stimulating and facilitating the creation of multi-stakeholder partnerships to promote the sound use of wood. Wood procurement policies which encourage the sustainable management of forests, without creating barriers to trade, should be developed. Governments should provide information on, and promote the use of, environmentally friendly consumer products, energy supplies, and building construction products and systems derived from forest resources, and encourage research on the sound and innovative use of wood, including life cycle inventory and analysis (LCI/LCA), and take this information into account when formulating policy (condensed from the recommendations of the seminar)."

During the October 2003 Timber Committee session delegates stressed that international wood promotion continues to be important.

2.5 Industrial development policies and structural oversupply

Related to wood products promotion is the promotion of industrial development of forest-based industries. Forest resources and the industries linked to them are an important part of rural economic development. Some development policies facilitate the building of forest products manufacturing plants in order to provide employment and give additional value to the forest resource. Policies for forest-based industry development vary considerably as they are implemented at the local, regional and national levels. They may include financial grants, reduced taxes, low- or no-interest loans, building transportation systems and other infrastructure and either giving or providing low rent or rent-free land and buildings.

Structural oversupply combined with weak consumption and prices is occurring for some wood products in the EU/EFTA and North American subregions according to the analysis in the following chapters. Examples are pulpwood supply in the southeastern United States and indeed in many parts of Europe, most wood-based panels in Europe and North America, as well as some commodity assortments of sawn softwood.

Most often Governments' investments in forest-based industries are based on national objectives, and involve domestic and export market evaluations. However, in market sectors currently facing overcapacity, for example some panel products and some pulp and paper grades, additional capacity only weakens the current market. If the costs of the new capacity are low, it may take market share at the expense of others. It is inevitable that rationalization will occur, along with modernization; however, in cases where a mill closes in a region dependent upon it for direct and indirect employment, the result can mean disaster for the community.

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[20] http://www.unece.org/trade/timber/efsos/welcome.htm

The European Union faces the dilemma of creating rural development without market distortion. The European Commission has investigated some of its member countries' subsidies for wood industry development.

One of the policy conclusions of the ongoing European Forest Sector Outlooks Studies is that there is natural and economic potential for considerable expansion in eastern Europe and the CIS, in particular in Russia. However, this is contingent upon the depth and duration of forest industry investments. Many of the current investments are coming from western and Nordic Europe. Progress towards a market economy is improving investment climates in these countries and should spur further growth in the forest sector. These developments will also have a notable impact on forest products trade and production in western Europe and Asian markets. However, they could also aggravate the oversupply problem in other parts of Europe.

The question facing Governments is to what extent the structural roundwood oversupply observable in some regions should be left to market actors to resolve without government intervention and to what extent, because of the risks posed to the policy goals of rural development and sustainable forest management, government action is needed. Resolution 2, "Enhancing the economic viability of sustainable forest management in Europe", from the Fourth Ministerial Conference on the Protection of Forests in Europe (MCPFE), on economic viability of forest management outlines the type of measures which Governments believe desirable[21].

During the October 2003 Timber Committee Market Discussions, many delegations confirmed the oversupply situation for roundwood and some other forest products, in several regions. They mentioned the measures being taken, including capacity reductions and promotion exercises, as well as the consequences for prices which were weak in many areas.

2.6 Climate change policy

The ongoing policy discussions on climate change will influence, perhaps radically, the economic and policy environment in which the forest and forest products sector carries out its activities. Some of the proposed measures could be advantageous to the forest sector, but nevertheless, the manufacturing side could incur some additional costs and constraints. The third Conference of Parties to the United Nations Framework Convention on Climate Change, held in Kyoto, Japan, in 1997, resulted in a legally binding commitment, the "Kyoto Protocol". The Protocol defines target levels for emissions reductions in each country, as well as three "flexible mechanisms" by which countries can fulfil their commitments for emissions reduction.

Signatory countries committed themselves to reduce emissions of greenhouse gases between 2008 and 2012 by at least 5%, compared to the 1990 levels. For European Union countries, the emissions cut was set at 8%.

As of November 2003, the Kyoto Protocol has been ratified by a large number of countries; however, in the aggregate they do not yet represent over 55% of the 1990 level of carbon dioxide emissions (a requirement for coming into force). In November 2003 it appeared that, the Protocol would not be ratified as expected by the Russian Federation and that would not raise the sum of the 111 signatory parties from 44.6% to the necessary 55% of the 1990 level of carbon dioxide emissions. The Russian Federation accounted for 17.4% of the carbon dioxide emissions in 1990. The delays in ratifying the Protocol by Russia and other countries have created uncertainties about its future.

From the perspective of climate change, the most important contributions of the forest sector may be summarized as follows:

- Forests (including forest soils) are the main terrestrial biotic store of carbon: deforestation emits carbon to the atmosphere, but increase in growing stock or area of forests usually stores carbon ("carbon sink" function). Under certain strict conditions still under negotiation, human-induced increases in carbon sinks, e.g. by planting forests, can be set against carbon emissions. Measures under land use; land use change and forestry (LULUCF) are also eligible for joint implementation and clean development mechanism rules.
- As a renewable source of energy, wood can substitute for non-renewable energy sources, thus reducing net emissions of carbon.
- Carbon is also stored in forest products, although the significance of this storage varies according to whether the period in use is quite short (e.g. sanitary paper, pallets, packaging materials) or long (sawnwood, panels, paper in books). Currently excluded from negotiations during the first commitment period until 2012, future negotiations may deal with carbon stocks in value-added forest products.
- Forest products, which are from a renewable raw material and use relatively little fossil fuel for their manufacture, can substitute for non-renewable, energy-intensive materials.

The negotiations under way for the implementation of the Kyoto Protocol and other parts of the UNFCCC are highly complex. Some of the most difficult issues concern forests, including the allowable extent of carbon sink trading (e.g. "Kyoto forests" in a country, with good growing conditions, possibly tropical, compensating carbon emissions in another); rules for measurement and application of LULUCF agreements; how to deal with harvesting of forests (temporary destruction of the carbon store); and certification that a particular measure was "human induced" for the purposes of the Kyoto Protocol, and not just normal practice. Indeed, the negotiations have become so complex that it is clear that their implications need to be properly evaluated by standard forest policy processes. Considerable capacity-building for foresters and climate change negotiators is required. In fact, FAO has advanced this kind of training in Central America and has started capacity-building processes in Africa and Asia.

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[21] http://www.minconf-forests.net/

The use of biomass energy for energy generation can play an important role in mediating climate change. In contrast to the consuming of fossil fuel, the use of sustainably produced biofuels does not result in net release of carbon dioxide into the atmosphere, since the CO_2 released through the consumption of biofuel is taken up by regrowing biomass. Wood energy can also substitute for fossil fuel-based energy generation. Mixes of wood and fossil fuels can reduce toxic emissions in power plants. Wood energy policies are therefore becoming more significant in the national energy programmes.

European countries can reduce their CO_2 emissions by using sustainable and non-polluting energies to replace current fuels. Fossil fuels can be replaced by biomass, including forest residues, wood, and wood waste. Biomass is largely defined as organic matter available on a renewable basis, including forest residues, wood, and wood waste.

One way to promote wood energy is to place a carbon tax on fossil fuels. The original aim of carbon taxation is the reduction of CO_2 emissions through incentives. The tax becomes part of the energy production costs, thereby promoting the use of alternative fuels to reduce the amount of CO_2 emissions. In the long term it can have positive effects on the development of technology that contributes to prevention of global warming.

During the October 2003 Timber Committee Market Discussions, delegates noted that there are complementarities between carbon sequestration and carbon substitution as two main ways in which forests and wood can contribute to mitigating climate change. Climate change aspects need to be integrated into wood energy policies, which are discussed below. The role of wood energy in national forest services needs to be enhanced to develop specific policies on wood energy and climate change issues

2.7 Wood energy promotion policies

Energy policies in general support and promote renewable energy sources, including woody biomass. Major programmes are in place to stimulate renewable energies at the international, national and local levels. Thus far, little has been implemented in most countries on the crucial question of price relationships between energies, for instance through a carbon tax. Nevertheless, wood-energy-fired plants (both partially based on wood and entirely based on wood) are on stream, at the industrial and domestic level, throughout the UNECE region, including Austria, Finland, Germany, Sweden, and the United States.

The forest sector is well placed to respond to broad energy policy goals of renewability and security of supply:

- There is a large volume of unused wood in the UNECE region forests, leading to a structural oversupply of roundwood in some areas. This situation provides a good background for developing wood energy markets.
- A new outlet for small-sized wood for energy markets would help improve the economic viability of forest management in Europe and other subregions.
- Modern, efficient wood-burning technology is available, well-tested and cost effective given the right combination of factors.
- Some wood-using industries generate their own energy from bark, residues and black liquors, thereby reducing fossil fuel use and waste disposal requirements. These industries have solid experience in biofuel handling and energy generation, including cogeneration of heat and power (CHP).

However, in any conceivable scenario, in most UNECE countries[22] wood could only be a relatively minor part of the energy input mix, though important in rural areas and for forest industries.

The Kyoto Protocol has given additional incentive for the promotion of wood-based energy. The use of wood energy is one means for member countries to manage their emissions reduction obligations. Additional use of wood for energy will increase demand for wood and could eventually lead to higher prices both for roundwood and residues. Higher demand and higher prices could be an advantage for forest owners and traders and a disadvantage for competing users.

Developing new markets for wood can be controversial within the forest and forest industries sector, and that is the current situation with the stimulation of renewable energies. As the European Union has recommended doubling the percentage of energy produced from renewable resources, many European countries have initiated programmes to promote wood-based energy research, development and implementation. Wood-based energy will create competition for some raw materials, for example some manufacturing residues that could be used for pulp, panels or energy.

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[22] Exceptions would be forest-rich countries with relatively small economies, such as Finland and Sweden.

A controversy has developed with some sectors opposing support to wood energy, alleging unfair competition for their raw material supply, especially when mill closures have been blamed partly on rising raw material costs due to competition with the energy sector. This is currently the situation with the European Panel Federation, and this issue has received particular attention at their recent meetings and in their *Annual Report 2003*.

In particular, the pulp and paper industry is an energy-intensive and energy-efficient industry. In its cost structure, energy can be as much as 25% of the manufacturing costs, and this has been a major incentive to improve energy efficiency. Between 1990 and 1997 CO_2 emissions from pulp and paper production decreased by 17%, in part due to improved combined heat and power technologies. CHP plants produce approximately one third of the total electricity needed for papermaking.

The second important factor is the increased use of biofuel. The pulp and paper industry is one of the largest producers and consumers of renewable energy: almost 50% of the thermal energy consumed by the industry is based on biofuel. The third important factor is the increased use of recovered paper in papermaking processes. Government policies to promote recycling, in part to preclude landfilling of wastes, have generated enormous amounts of recycled paper and paperboard. Besides providing a balanced use of the industry's raw materials, recycling of paper is a key element of the industry's carbon cycle, since it prevents considerable emissions of methane from the landfilling of used paper.

The theme of the Timber Committee Market Discussions in October 2003 was the market effects of wood energy policies. Before the opening of the discussions, there was a special policy forum on "forests, wood and energy". The wide-ranging discussion on these topics was summarized by the secretariat in a post-session press release[23]:

"Biomass is one of the renewable energies with the greatest potential for expansion, and wood is by far the largest component of biomass energy. Wood energy is already widely used, and is available, on a sustainable basis, for relatively modest investment, all over the UNECE region. Wood energy not only provides heat and light, but also income and employment, and contributes to carbon sequestration in the context of climate change. In most areas, with the prevailing structure of energy prices, wood energy is at present not economically competitive with fossil fuels. However, several regional initiatives have demonstrated the feasibility of significantly increasing the volume of wood used for energy. The development of a market for wood energy represents a significant opportunity to raise the income of forest owners, whose economic viability is threatened in many areas, often arising from lack of local demand, and in general to promote rural development. Governments should create supportive economic and technical conditions for an expansion of the production and use of wood energy, in the context of broader policy frameworks, for renewable energies and for the forest and timber sector, taking account of the legitimate interests of all stakeholders, including some wood using industries who would face increased competition for their raw material supplies."

The Committee approved the following statement of its position:

"Wood-based energy has been and is being promoted by Governments and forest owners throughout Europe as a means to improve forest viability, provide rural employment, promote renewable resources and reduce CO_2 emissions from fossil fuels, and thereby mitigate climate change. In treating this topical issue, the Committee felt wood energy should be promoted by Governments, noting an excess of growth over removals in the region's forests, while acknowledging the concern of some industry sectors for raw material competition."

2.8 Trade policy, tariff and non-tariff barriers

The current Doha Development Agenda of World Trade Organization (WTO) trade talks will significantly influence the trading environment for forest products. Among the questions under negotiation which are relevant to the sector is the level of tariffs, but also, the trade system for agricultural products (through its effect on demand for agricultural land and rural development policy), and discussions on trade and environment. At present, the outcome of the negotiations is not foreseeable, but several countries and trading groups have tabled proposals. Some of these are summarised below. In addition, trade policy is agreed at the regional and bilateral levels which may also influence conditions

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[23] www.unece.org/trade/timber/press.htm

In November 2002, the United States tabled an ambitious proposal at the WTO calling for the elimination of tariffs on all consumer and industrial products by no later than 2015 (*Forest Products Trade Highlights*, USDA Foreign Agricultural Service, March 2003). Under the proposal, tariffs on products in the Uruguay Round zero-for-zero sectors (e.g. paper) and in certain other sectors (e.g. wood products) would be eliminated as soon as possible, but no later than 2010. In the negotiations for the Free Trade Area of the Americas (FTAA), the United States has proposed that the tariffs on paper and wood products be eliminated immediately, upon entry into force of the FTAA.

In July 2003, in a preparatory meeting for the Cancún WTO ministerial conference in September 2003, representatives of forest and paper associations from the United States and New Zealand advocated immediate removal of tariffs on wood and paper products. However, the Cancún ministerial conference ended in a deadlock without consensus, causing concern about future negotiations on the Doho Development Agenda. Forest issues have also been discussed in the WTO Committee on Trade and Environment.

In July 2003 the United States issued a list of non-tariff barriers affecting market access for non-agricultural products in preparation for discussions as part of the Doha Agenda negotiations. In the wood products sector, the statement reads, "United States industry reports that building codes and product standards are often drafted in such a manner that restricts the expansion of United States wood products into regulated construction markets", thus impeding market access.

When the Canada-United States Softwood Lumber Agreement expired in 2001, the United States imposed countervailing and anti-dumping duties totalling 27% on Canadian sawnwood imports above a quota volume. Attempts to negotiate a settlement broke down again in July 2003 when a compromise proposal was objected to by the Washington-based Coalition for Fair Lumber Imports (*Lumber and Building Materials Daily*, August 2003). The United States industry's concerns include whether Canadian sawnwood is sold below cost, whether stumpage fees are too low, and the percentage of the United States market held by Canadian exporters (currently about 35%). In the aftermath of the Softwood Lumber Agreement the Canadian market share has increased, exactly opposite the objective of the duties. However, United States consumers do not want higher prices for sawnwood, even if it protects United States industries, and homebuilders' associations have come out against the duties. Furthermore, some major United States forest products companies now have significant operations in Canada, and therefore find it more complex to decide where their interests lie.

Following the October 2003 Timber Committee Market Discussions, the Committee's official market statement included the following on the situation for the United States-Canada softwood lumber dispute:

"United States imports from Canada continue to be subject to the 27% duty imposed following the end of the Softwood Lumber Agreement. It was noted that trade disturbances such as the United States anti-dumping and countervailing duties on Canadian sawn softwood have underlying impacts such as the transfer of trade to other countries. Such formal trade actions can lead to fundamental changes such as increases in manufacturing efficiency. Canada forecast a 4% increase in exports in 2004 to reach 36 million m^3, overcoming a forecast dip in 2003. Most of these increases will be to offshore markets, particularly in Asia."

Phytosanitary measures, such as the EU requirement for heat treatment of sawnwood and logs to prevent the spread of the pinewood nematode, instituted in the early 1990s, also influence trade and markets. To satisfy these requirements it was necessary to introduce drying facilities, which at that time were not common for North American exporters. North American exporters of unseasoned sawn softwood viewed the European Union and EFTA countries' ban as a non-tariff trade barrier. Since 1990 Canada and the United States have lost market share to Nordic and, more recently, Baltic countries, in part because of their technological investments. ("Non-Tariff Measures: A Global Context for the Changing International Competitiveness of the Canadian Softwood Lumber Industry," by D. Cohen, N. Muto and R. Kozak, unpublished, 2003). Because Canadian sawmillers could not meet the kiln-drying, heat-treating or certification requirements, exports to the United Kingdom, which had doubled from 1986 to 1990 to reach 3.2 million m^3, fell sharply to under 0.7 million m^3 in 1993. Thus the gain from successful marketing campaigns by North American exporters was lost. While the European example is dramatic, it is not an isolated case, and other countries, for example the United States, attempt to protect their forests through phytosanitary measures to prohibit imports of potentially infested roundwood and unseasoned wood products.

2.9 Conclusion

The above examples of key policies affecting forest products markets are also examples of the ways in which forest products markets affect policies beyond the forest and timber sector.

It will not be possible to provide definitive answers to these complex questions, but the Committee discussed them and stressed the need to communicate proactively with other sectors, which, in many cases, are not aware of forest sector conditions and concerns.

Chapter 3

United States housing remains strong despite economic weakness in UNECE region:

Main economic developments affecting forest products markets in 2002 and early 2003

Highlights

- United States housing remained robust through 2002 and in the first quarter of 2003, spurred by the lowest mortgage rates in 40 years.
- Global economic activity was disappointing in 2002 and remained sluggish in the first half of 2003, despite the rapid end of the war in Iraq.
- Interest rates fell to historically low levels throughout the UNECE region.
- Current forecasts are for a moderate strengthening of growth in North America and western Europe in the second half of 2003 and in 2004.
- Economic activity in eastern Europe and the CIS slowed down in 2002, although growth rates are generally higher than in western Europe.
- Growth in 2002 was generally stronger in the CIS and the Baltic states than in central Europe.
- The short-term outlook for eastern Europe is for a slowdown in growth overall, but for strong growth in the CIS.
- Construction stagnated in 2002 in western Europe, especially in new residential construction, while repair and remodelling showed some improvement over 2001.
- While European construction growth slowed in 2002 and early 2003, the consensus is for a moderate increase in 2004, followed by more robust improvement in 2005.

3.1 General economic developments

The analysis below is taken from the *Economic Survey of Europe*[24] and its update in July 2003. The full text of the *Survey* is available from the UNECE website[25]. The second part of this chapter focuses on construction developments.

3.1.1 *Global economic developments in 2002 and 2003*

Global economic developments were disappointing in 2002. Hopes for the beginning of a sustained recovery from the recession of 2001 were frustrated. Economic activity has remained sluggish in the first half of 2003. The consensus of forecasters is now for a recovery to start in the second half of 2003 and to gain further momentum in 2004. The short-run outlook for the world economy, however, remains dominated by significant downside risks. The rapid ending of the war in Iraq has not removed the considerable uncertainty surrounding the short-term global economic outlook. Oil prices rose markedly towards the end of 2002, largely reflecting mounting geopolitical tensions.

The dynamics and sustainability of world output growth continued to be strongly dependent on economic developments in the United States. Economic activity in Japan and western Europe, both potential engines of growth for the world economy, remained disappointingly slow (graph 3.1.1 and table 3.1.1). In contrast, growth in eastern Europe and the CIS remained quite resilient (table 3.1.2).

3.1.2 *Western Europe and North America in 2002 and 2003*

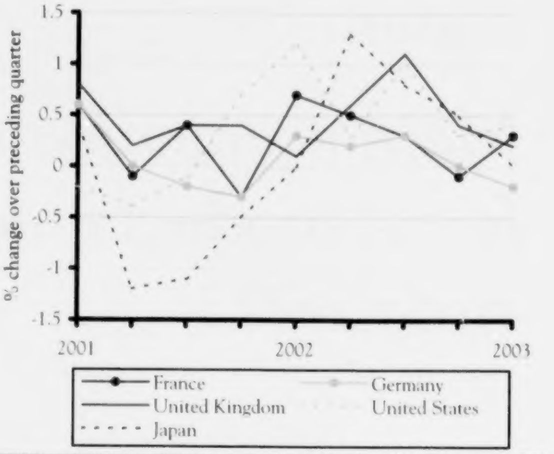
3.1.2.1 *Developments in 2002*

Economic growth in the industrialized countries in 2002 was restrained by the impact of weakening consumer and business confidence on private sector spending. This also contributed to the continuing slide in international share prices, which was accentuated by the uncertainty about the underlying strength of the corporate sector. Lower share prices, in turn, had a negative impact on household wealth and the financing costs of companies.

Real GDP in the United States rose by 2.4% in 2002, up from 0.3% in 2001. But this robust performance for the year as a whole masks a slowdown to near stagnation in the final quarter. In the foreign exchange markets, the dollar depreciated, a tendency which gathered momentum in early 2003. The stance of monetary policy remained expansionary in 2002.

GRAPH 3.1.1

Quarterly changes in real GDP, 2001-2003



Note: Data are seasonally adjusted.
Sources: National statistics, Eurostat and New Cronos Database, 2003.

In western Europe, economic growth was quite sluggish in 2002, real GDP rising on average by about 1%. In the euro area, the annual rate of growth was even lower, at about 0.8%. Against the background of deteriorating growth prospects, the European Central Bank (ECB) lowered its key interest rate by half a percentage to 2.75% in December 2002, the first reduction since November 2001.

3.1.2.2 *Developments in the first half of 2003*

In the United States, real GDP rose by 0.4% in the first quarter of 2003, only slightly more than in the preceding quarter.

Continued increases in house prices and further declines in interest rates continued to provide a conducive environment for household borrowing. Residential investment remained buoyant, stimulated by low mortgage rates.

The current account deficit increased further in the first quarter of 2003 and is projected to correspond to some 5.5% of GDP for the year as a whole.

Annual consumer price inflation fell to 2.1% in May 2003. On 25 June the Federal Reserve lowered its target rate to 1%, its lowest level in 45 years. In the foreign exchange markets the dollar depreciated markedly against the euro in the second quarter of 2003 (graph 3.1.2). The euro appreciated in real effective terms by nearly 16%, whereas the yen real effective exchange rate was broadly unchanged over this period (graph 3.1.3).

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[24] *Economic Survey of Europe*, (2003 No. 1). Economic Analysis Division, UNECE, Geneva, Switzerland.

[25] www.unece.org/ead/ead_h.htm

Petroleum prices reached a peak of $34 per barrel (spot prices for Brent crude) in early March 2003. After the end of the Iraq war, prices declined rapidly and in late June they stood at around $27 per barrel.

TABLE 3.1.1

Changes in real GDP in the developed market economies, 2001-2004

(Percentage change over previous year)

	2001	*2002*	*2003*	*2004*
France	2.1	1.2	0.8	2.0
Germany	0.6	0.2	–	1.2
Italy	1.8	0.4	0.6	1.6
Austria	0.7	1.0	0.5	1.3
Belgium	0.8	0.7	0.8	1.6
Finland	0.6	1.6	2.0	2.8
Greece	4.1	4.0	3.6	3.7
Ireland	5.7	6.0	3.4	4.2
Luxembourg	1.2	1.1	2.5	2.5
Netherlands	1.3	0.2	-0.2	1.3
Portugal	1.6	0.5	0.2	2.1
Spain	2.7	2.0	1.9	2.6
Euro area	1.6	0.9	0.7	1.7
United Kingdom	2.1	1.8	1.8	2.5
Denmark	1.4	1.6	1.0	2.0
Sweden	1.1	1.9	1.4	2.1
European Union	1.7	1.1	0.9	1.9
Cyprus	4.1	2.2	2.2	4.3
Iceland	2.9	-0.5	2.1	3.5
Israel	-0.9	-1.0	0.5	2.7
Malta	-1.2	1.0	2.8	3.3
Norway	1.4	1.5	1.0	2.0
Switzerland	0.9	0.1	0.1	1.4
Turkey	-7.5	7.8	2.5	2.6
Western Europe	1.3	1.3	0.9	1.9
Canada	1.9	3.3	2.3	3.0
United States	0.3	2.4	2.3	3.4
North America	0.4	2.5	2.3	3.4
Japan	0.4	0.2	0.9	0.8
Total above	0.8	1.7	1.5	2.4
Memorandum items:				
4 major western European economies	1.5	0.8	0.7	1.7
Western Europe and North America	0.8	1.9	1.6	2.7

Notes: All aggregates exclude Israel. Data for 2003 and 2004 are forecasts.

Sources: Eurostat, OECD, *OECD National Accounts* (Paris), 2003; national statistics; UNECE secretariat estimates; IMF, *World Economic Outlook* (Washington, D.C.), 2003; OECD, *OECD Economic Outlook*, No.73 (Paris), 2003; *Consensus Forecasts*, June 2003; *The Economist*, 2003.

TABLE 3.1.2

Changes in real GDP in eastern Europe and the CIS, 2001-2003

(Percentage change over previous year)

			2003	
	2001	*2002*	*Jan.-Mar. actual*[1]	*July official forecast*
Eastern Europe	3.1	3.0	3.1	3.5
Albania	6.5	4.5	.	6
Bosnia and Herzegovina	2.3	4.0	.	4
Bulgaria	4.1	4.8	3.8	4.8
Croatia	3.8	5.2	4.9	4.2
Czech Republic	3.1	2.0	2.2	2.3
Estonia	6.5	6.0	5.2	4.8
Hungary	3.8	3.3	2.7	3.5
Latvia	7.9	6.1	8.8	5.6
Lithuania	6.5	6.7	9.1	6.1
Poland	1.0	1.4	2.2	2.5-3.0
Romania	5.7	4.9	4.4	4.5-5.0
Serbia and Montenegro	5.5	3.8	.	3.9-4.4
Slovakia	3.3	4.4	4.1	4
Slovenia	2.9	3.2	2.3	2.7-3.0
The fYR of Macedonia	-4.5	0.7	2.2	2-3
CIS	6.1	4.9	7.1	5.7
Armenia	9.6	12.9	11.3	7
Azerbaijan	9.9	10.6	7.9	7.5
Belarus	4.7	4.7	5.6	6-6.5
Georgia	4.7	5.3	4.4	4.5
Kazakhstan	13.6	9.5	10.6	8.3
Kyrgyzstan	5.3	-0.5	5.2	6
Republic of Moldova	6.1	7.2	6.0	5
Russian Federation	5.0	4.3	6.8	5.5
Tajikistan	10.2	9.1	12.1	7.4
Turkmenistan[2]	20.5	21.2	.	16
Ukraine	9.2	4.8	7.0	5.5
Uzbekistan	4.5	4.2	.	5.3
Total above	4.9	4.2	5.5	4.9
Memorandum items:				
Baltic states	6.9	6.3	8.3	5.6
Central Europe	2.5	2.2	2.4	2.9
South-east Europe	4.8	4.6	3.8	4.5
CIS without Russian Federation	8.4	6.2	7.5	6.3
Caucasian CIS	8.1	9.4	7.6	6.5
Central Asian CIS	9.4	7.3	8.7	7.0
Three European CIS	7.8	4.8	6.6	5.7

Notes: Forecasts are those of national conjunctural institutes or government forecasts associated with the central budget formulation. Aggregates are UNECE secretariat calculations, using PPPs obtained from the 1996 European Comparison Programme.

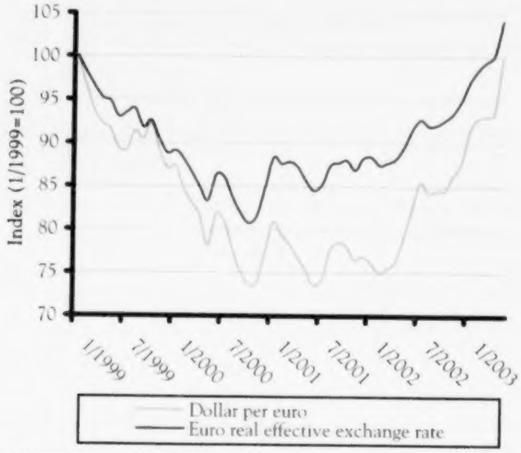
[1] January-March 2003 over January-March 2002.

[2] Figures for Turkmenistan should be treated with caution. The deflation procedures used to compute official growth rates are not well documented and the reliability of these figures is questionable.

Sources: National statistics, CIS Statistical Committee and direct information from national statistical offices to UNECE secretariat.

GRAPH 3.1.2

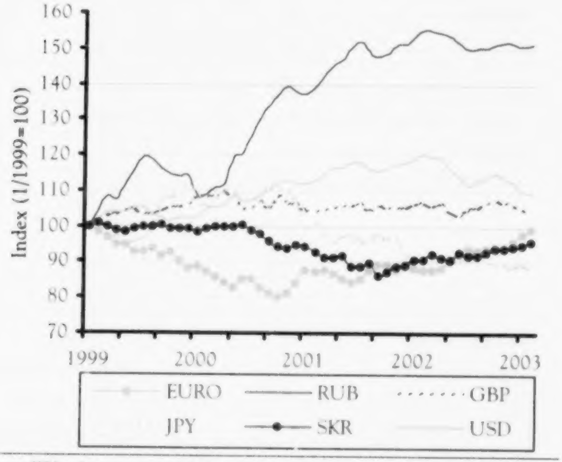
Exchange rate of the euro, January 1999-May 2003



Note: Dollar per euro and real effective exchange rates are average monthly rates.
Source: European Central Bank, 2003.

GRAPH 3.1.3

Real effective exchange rates of selected currencies, 1999-2003



Notes: JPY is Japanese yen, RUB is Russian ruble, SKR is Swedish krona, GBP is British pound sterling and USD is United States dollar.
Sources: European Central Bank and IMF International Financial Statistics, 2003.

Overall economic activity in the euro area stagnated in the first quarter of 2003 compared with the preceding quarter, a feature which broadly continued in the second quarter.

The first half of 2003 saw a declining level of inflation across the euro area to 2% in June 2003. Moderate inflationary expectations in combination with a weakening outlook for economic growth prompted the ECB to further reduce its key interest rate in two steps to 2% in June 2003.

Real short-term and long-term interest rates have fallen to very low levels.

3.1.2.3 *Short-term outlook*

The short-term economic outlook remains surrounded by a large margin of uncertainty. Current forecasts embody the assumption of a moderate strengthening of growth in the second half of this year and a continuation of this process in 2004. The United States is seen to remain the engine of growth for the world economy. Real GDP in the United States is forecast to increase by 2.3% in 2003 and by 3.4% in 2004. In the euro area, real GDP will increase at best by 0.7% this year, with substantial variation, however, across individual countries. Growth in the euro area and western Europe at large is notably pulled down by the cyclical downturn in Germany, where real GDP is forecast to stagnate this year; in fact, even a worse outcome cannot be excluded. For the aggregate of European Union economies, real GDP is expected to grow by slightly less than 1%, the lowest increase since the recession of 1993.

3.1.3 *Eastern Europe and the CIS in 2002 and 2003*

3.1.3.1 *Developments in 2002*

Activity in eastern Europe and the CIS slowed down in 2002, but rates of economic growth in these regions remained generally higher than those in western Europe. The slowdown was more pronounced in some of the CIS countries, particularly in the two largest economies, Russia and the Ukraine. Nevertheless, aggregate GDP in the CIS grew by 4.8% in 2002. The growth of aggregate GDP in eastern Europe was considerably lower (3%) and was basically unchanged from the previous year. Growth patterns varied in different parts of the subregion: central Europe continued to be the slowest growing subregion (weighed down by the sluggish Polish economy), while south-eastern Europe and, especially, the Baltic states performed considerably better than the average.

The area as a whole was among the fastest growing regions in the world. Among other things, this reflected an important change, namely, a shift from external to domestic sources of growth. The preliminary statistics point to the enduring strength of domestic demand as the main factor that prevented a further weakening of output growth in this part of the UNECE region. Most of the economies of eastern Europe and the CIS made further progress towards price stability or lower rates of inflation.

One of the surprising developments during the year was the strength of eastern European exports in the face of the persistent weakness of economic activity in western Europe. As a consequence, there was a large increase in the eastern European share of western European markets despite the weakness of import demand.

Due to the nature of their underlying comparative advantage and the existing differences in labour costs, the eastern European economies are likely to gain further market shares in western European and global markets in the short to medium run. In the longer run, however, comparative advantage is not static, and as development and income levels in eastern Europe start to catch up with those in the industrialized countries, new sources of international competitiveness will have to be developed via the accumulation of physical and human capital. This transformation may also be observed in the forest products sector.

The year 2002 ended with the successful conclusion of negotiations with 10 candidates for European Union accession. It is now generally accepted that in view of the degree of systemic transformation already achieved in the most advanced reformers – the countries of central Europe and the Baltic region – the period of their transition from plan to market is coming to an end. Accession to the European Union will formally confirm its successful completion.

3.1.3.2 *Developments in the first half of 2003*

In the first quarter of 2003, economic activity in the eastern European and CIS subregions generally remained vibrant, and in a number of countries growth gained even further momentum. However, there was considerable divergence in performance patterns among countries and subregions: Central Europe was still the slowest growing subregion, with an average rate of GDP growth of 2.4% year-on-year. By contrast, economic growth in the Baltic countries accelerated perceptibly and this area remained the fastest growing subregion in eastern Europe. Growth in southeast Europe waned somewhat compared with the final quarter of 2002.

The volumes of eastern European exports and imports are estimated to have continued to expand by about 7%, significantly faster than the recent pace of world exports.

In the first quarter of 2003, there was an unexpectedly strong surge in economic activity throughout the CIS, with aggregate GDP growing by 7.1% year-on-year. The main factors behind this were the recent developments in world energy and commodity prices as well as the robust performance in the subregion's largest economies, i.e., Russia, the Ukraine and Kazakhstan.

3.1.3.3 *Short-term outlook*

The short-term outlook for *eastern Europe* has deteriorated somewhat as compared to assessments at the beginning of the year. Optimistic expectations about the economy of the euro area have failed to materialize and a number of eastern European economies saw trend deterioration in performance early in the year. There are also some concerns about the outlook for export growth in the second half of the year. These concerns are based not only on the lack of signals of improving external conditions, but also on the increasingly strong competitive pressure from cheaper Asian producers. At mid-year, aggregate GDP in the eastern European subregion was forecast to increase by 3.5% in 2003 as a whole.

The speed of the recovery in the CIS subregion in the first months of the year surpassed all expectations and prompted upward revisions in a number of countries. According to the official forecasts available at mid-year, aggregate GDP in the CIS was expected to grow by 5.7% in 2003 as a whole. According to the latest (June) forecasts, Russia's GDP was expected to grow by 5.5% in 2003. If the present strong growth continues through the end of the year, the rate of growth of aggregate GDP in the CIS for 2003 as a whole may exceed even these revised forecasts.

3.2 Construction sector developments[26]

This section presents short-term trends in construction in Europe and North America. Where information is available, the section focuses on new residential construction, plus the repair and remodelling market, because these sectors use the most wood.

3.2.1 *Residential construction in North America*

3.2.1.1 *United States*

In review of 2002, the United States housing market never flinched during the 2001 recession, and it remained very strong through 2002 despite the weak economic recovery (graph 3.2.1). The lowest mortgage rates in 45 years spurred a refinancing boom that put hundreds of dollars into consumer pockets each month. Furthermore, many individual consumers tapped into rising home equity values, which shifted additional spending power to consumers.

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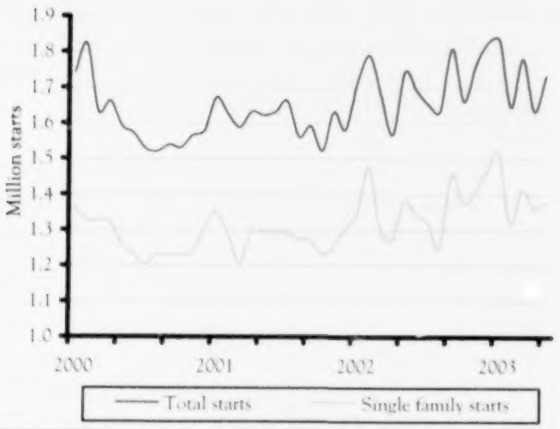
GRAPH 3.2.1

United States residential markets, 2000-2003



Note: Figures are annualized and seasonally adjusted.
Source: United States Bureau of the Census, 2003.

Although housing did well in 2002, the rest of the construction sector did not. Business investment is still contracting. The non-residential private investment component of GDP fell almost 6% in 2002, masking a slump in private, non-residential building construction by almost 18% (adjusted dollars) compared with the preceding year (table 3.2.1).

However, there were two areas showing strength within the private sector expenditures on educational and hospital/institutional buildings grew 6.2% and 3.4% respectively. The other sector showing growth was public construction with strong federal construction activity compensating for weak activity at the individual state level.

Looking at developments in the first months of 2003, housing markets were essentially not influenced by the war with Iraq: Starts averaged 1.75 million through April[27]. The main drivers continue to be attractive interest rates, rising home equity values and continuing per capita income growth, despite a job market that has seen no net new job creation in 24 months. The main question is – will the housing boom continue through 2003? Most analysts say yes, projecting new housing activity to equal last year's output of 1.7 million[28]. Looking further out, analysts expect 2004 demand to pull back modestly as interest rates move upward in response to an improving economy.

TABLE 3.2.1

Value of United States construction, 2001-2002 (billion 2002 dollars)

	2001	*2002*	*% change*
Total construction	780	767	-1.7
Private building construction	601	581	-3.3
Residential[1]	356	372	4.3
Non-residential	185	152	-18.0
Private, other[2]	22	22	0
Public construction[3]	179	186	3.7

Notes: [1] Includes improvements. [2] Non-building construction. [3] Public funding source.
Source: United States Department of Commerce, C30 Reports, 2003.

United States expenditures for all types of residential repair showed an 8% increase from 2001 totals. The major expenditure increases have been in room additions and major alterations, such as kitchen and bath remodelling (APA, Report E169, April 2003). APA's forecast is for tne home improvements category to continue showing most of the growth, (+20% between 2002 and 2005). Home repair and maintenance activities are expected to continue their pattern of slow growth for the next few years.

Most analysts expect private, non-residential building construction activity to remain subdued at least until the manufacturing sector rebounds. However, despite near-term problems, demographic trends bode well for public construction, as an aging baby boomer population and their "echo boom" kids should fuel the future pace of building activity for healthcare facilities and educational institutions, respectively. APA's forecast for non-residential building construction is for a 1.5% decline in 2003, but a rebound in 2004 and later years (graph 3.2.2). This sector is expected to improve only when the manufacturing sector starts growing again.

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[27] Seasonally adjusted annual rate

[28] Based on average of forecasts by the National Association of Realtors (May 2003), National Association of Homebuilders (May 2002), National Association of Business Economists (February 2003), Resource Information Systems, Inc. (January 2003) and APA – the Engineered Wood Association (April 2003).

TABLE 3.2.2

European construction, 2002-2005

(% change over previous year)

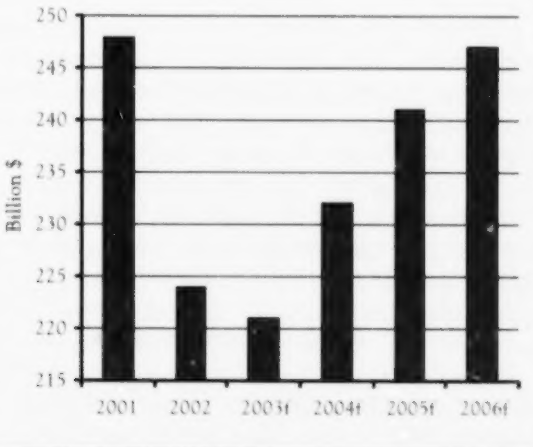
	2002	*2003f*	*2004f*	*2005f*
15 western European countries				
New residential	-1.3	-1.0	-1.7	-0.1
Residential renovation and modernization	0.0	0.8	1.2	1.8
New non-residential	-0.6	-1.6	-1.2	1.3
Non-residential renovation and modernization	0.7	0.4	1.3	2.0
New civil engineering	1.6	2.4	3.2	2.9
Total construction	-0.1	0.1	0.4	1.5
4 central and eastern European countries				
New residential	-4.2	-5.0	1.6	6.3
Residential renovation and modernization	8.9	5.1	6.1	7.3
New non-residential	-3.9	1.6	5.5	7.1
Non-residential renovation and modernization	-10.6	2.1	4.2	4.2
New civil engineering	-3.1	2.3	9.6	14.1
Total construction	-2.2	1.4	5.9	8.5

Note: f = forecast by Euroconstruct.

Source: Euroconstruct, *Executive Summary to the Construction Markets in Europe*, 2003.

GRAPH 3.2.2

Non-residential building construction in the United States, public and private combined, 2001-2006



Note: 1996 dollars.

Source: APA - the Engineered Wood Association, Report E68, 2002.

3.2.1.2 *Canada*

The Canadian economy fared much better than that of the United States in 2002, and this supported the best housing market since the late 1980s. Canadian housing starts have improved steadily over recent years, growing from 152,000 in 2000 to 205,000 in 2002, a 35% increase. Residential construction activity has been solid through April 2003, and is expected to remain buoyant through the rest of 2003, with residential construction expenditures expected to increase 2.3%, following a phenomenal 16% increase in 2002. (Toronto Dominion Bank, Quarterly Economic Forecast). Canadian housing starts will reach 205,500 units in 2003, little change from last year, according to the Canada Mortgage and Housing Corporation.

As in the United States, non-residential construction continues to suffer from weak business investment. Expenditures on non-residential structures fell 6.4% in 2002, but the forecast for 2003 is for a modest improvement of about 1% growth, followed by 5% growth in 2004.

3.2.2 *European construction developments*[29]

3.2.2.1 *Total construction activity in 2002*

The total value of the construction sector output (excluding expenditures for services and the do-it-yourself (DIY) market) in all 19 Euroconstruct countries[30] reached €978 billion in 2002 (graph 3.2.3). New construction contributed 57% while the remainder was used for renovation and modernization (R&M). 2002 was a year of stagnation in western Europe as the European construction sector suffered from the poor overall economic climate, and weak confidence hindered construction spending by investors. Most of the weakness occurred in new residential construction while R&M showed some improvement over 2001. Euroconstruct expects small improvements in construction spending through 2004, with no substantial improvement expected until 2005.

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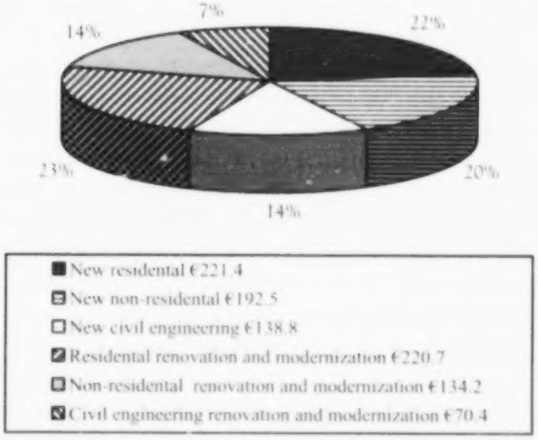
[29] Information for this section comes mainly from Euroconstruct, www.euroconstruct-budapest.com

[30] Euroconstruct's 19 countries include 13 EU member states (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal Spain, Sweden, and the United Kingdom), plus Norway and Switzerland, and 4 CEECs (Czech Republic, Hungary, Slovakia and Poland). Note Euroconstruct's 15 western European countries are not the EU15. Note that Euroconstruct's analysis of central and eastern European construction is based on 4 countries.

Germany accounts for 20% of the western European market, followed in importance by France, Italy, and the United Kingdom respectively (graph 3.2.4). In fact, there has been essentially no growth in the value of total construction during the past three years in the euro region.

GRAPH 3.2.3

European construction output by sector, 2002



Note: Numbers in billion euro.
Source: Euroconstruct, *Executive Summary to the Construction Markets in Europe*, 2003.

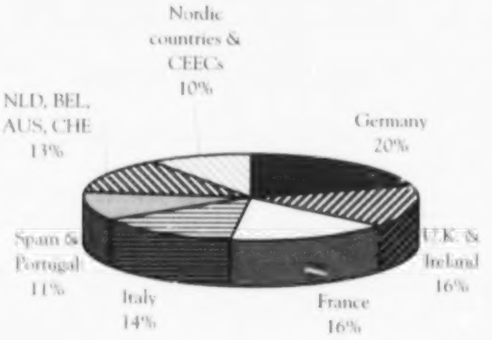
3.2.2.2 *Outlook for European construction in 2003 and beyond*

According to the latest Euroconstruct forecasts (June 2003), after stagnant growth in 2002, the consensus is for continued stagnation in 2003, followed by a very moderate increase in 2004 and more robust improvement in 2005. The outlook for the western Europe subregion is weak compared with the more robust outlook for central and eastern Europe: However there are major differences in the outlook between individual countries within the subregions (table 3.2.3). Structurally, central and eastern European construction is overwhelmingly dominated by new non-residential construction and civil engineering, while in the western economies, repair and maintenance is significantly increasing its share.

Growth (in percentage) terms in construction output by region is expected to be substantially higher in central Europe than in western Europe, partly because of the different construction mix.

GRAPH 3.2.4

European construction output by country, 2002



Note: Euroconstuct's CEECs include Czech Republic, Hungary, Poland and Slovakia. Nordic Countries include Denmark, Finland, Norway and Sweden, NLD = Netherlands, BEL = Belgium, CHE = Switzerland.
Source: Euroconstruct, *Executive Summary to the Construction Markets in Europe*, 2003.

The outlook for different types of construction activity is also mixed. Civil engineering (both in western Europe and the central and eastern European countries (CEECs)) is the most resilient sector, and is expected to grow about 3% per annum in the west and 9% per annum in the east over the period 2003-2005. In contrast, growth in new residential construction will moderate while modernization and renovation activity are expected to remain healthy in both regions.

3.2.2.3 *Residential construction*

Housing accounts for a large share of construction activity approaching 450 billion euros or 45% of total output in the 19-country Euroconstruct zone during 2002. Currently, the existing euro region housing stock is approaching 200 million units, and this bodes well for future renovation, maintenance and improvement activity. In fact, as Europe's low fertility rates negatively impact demand for new housing. The aging housing stock will cause renovation and modernization expenditures to grow more rapidly than new housing investment. In the west, the aging population will continue to reduce demand, while in the CEECs, demand for new housing is 2 to 3 times supply. This will support strong new house construction activity for the rest of the decade.

TABLE 3.2.3

European residential construction, 2001-2005

(Real annual growth rates, %)

	2001	*2002*	*2003f*	*2004f*	*2005f*
Austria	-5.5	-2.5	1.1	1.4	1.6
Belgium	0.1	-1.2	0.9	-0.7	2.2
Denmark	-8.7	3.0	2.8	3.0	2.9
Finland	-7	1.2	5.6	4.4	4
France	-0.6	0.3	-0.4	0.0	0.8
Germany	-7.1	-5.9	-1.2	0.0	1.9
Ireland	4.5	1.2	0.5	-4.9	-7.9
Italy	3.3	1.8	-1.2	-2.6	-1.7
Netherlands	-1.5	-1.4	1.1	1.1	1.9
Norway	7.4	1.8	-0.7	-2.4	-0.1
Portugal	-2	-6.7	-13.2	-8.2	0.1
Spain	2.9	2.2	1.0	0.6	1.0
Sweden	7.2	0.9	-0.3	3.2	2.4
Switzerland	-4.0	-2.3	-0.7	0.4	2.2
United Kingdom	-0.6	6.6	4.4	1.6	2.0
Western Europe (EC-15)	**-1.8**	**-0.7**	**-0.1**	**-0.2**	**0.9**
Czech Republic	5.9	5.6	4.5	5.8	6.8
Hungary	11	13.4	11.4	11.6	10.1
Poland	-7.4	-7.3	-10.1	-2.5	4.7
Slovak Republic	-9.8	2.2	-2.1	0.0	0.0
Central and eastern Europe (EC-4)	**-1.8**	**0.1**	**-1.4**	**3.3**	**6.7**
Euroconstruct countries (EC-19)	**-1.8**	**-0.7**	**-0.1**	**-0.2**	**1.0**

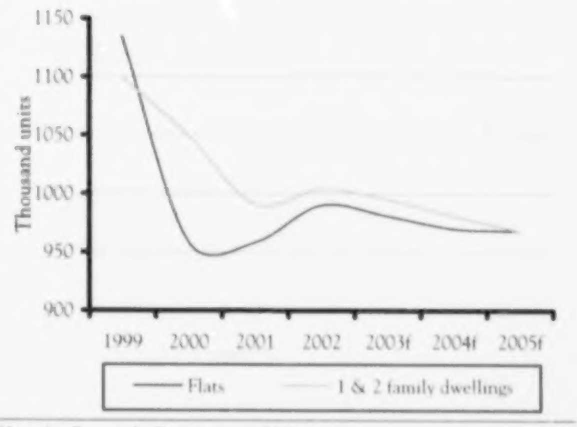
Note: f = forecasts by Euroconstruct, 2003.

Source: Euroconstruct, *Executive Summary to the Construction Markets in Europe*, 2003.

Completions (single family houses and flats) totalled 1.99 million in 2002 and are expected to fall slightly to 1.98 million in 2003, a drop of 18,000 units for the 19 Euroconstruct countries (graph 3.2.5). Looking to the future, the consensus is that housing investment will grow at a slower rate than the overall economy (total completions are expected to trend lower through 2005) although the downturn in new production will be partially offset by brisker growth in repair and maintenance.

GRAPH 3.2.5

European housing completions, 1999-2005



Note: f = Forecast by Euroconstruct, 2003.

Source: Euroconstruct, *Executive Summary to the Construction Markets in Europe*, 2003.

Chapter 4

Raw material consumption on the rise despite weak global economy: Wood raw material markets, 2002-2004[31]

Highlights

- The total removals of roundwood in the UNECE region were close to record levels in 2002.
- Consumption of roundwood is forecast to increase faster than production in the UNECE region during 2003 and 2004.
- Stronger demand within the CIS and Other Europe, as well as from export markets in Asia and elsewhere, has substantially increased removals in the two subregions.
- Roundwood exports from the Russian Federation were 14% higher in 2002 than the previous year.
- Raw material costs for sawmills and pulpmills fell in many regions for two main reasons: oversupply of roundwood and wood chips, and lower market prices for manufactured forest products.
- The trade surplus for roundwood in North America declined for the fifth consecutive year, due to declining exports.
- Although wood chip imports to the EU/EFTA region fell almost 11% in 2002, the region continues to be a large importer of wood chips.
- Almost 15% of the total roundwood removals in the UNECE were used as fuelwood in 2002, mostly in North America.
- Roundwood exports are predicted to be 3.4% lower in 2004 than in 2003 in the UNECE region with the largest declines occurring in the Other Europe subregion, where roundwood imports are also rising fast.

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Secretariat introduction

The secretariat expresses its appreciation to Mr. Håkan Ekström, for the following analysis of wood raw materials. Mr. Ekström is President of Wood Resources International and Editor-in-Chief of *Wood Resource Quarterly* and the *North American Wood Fiber Review*. His two publications track wood fibre markets, including prices, in Europe, Asia, Oceania, North and South America. Wood Resources International is a consulting firm with worldwide experience in wood raw materials markets. He worked previously with us in the production of the *European Timber Trends Study V*.

4.1 Trends in 2002 and 2003

4.1.1 *UNECE regional developments*

4.1.1.1 Roundwood removals

Roundwood removals increased in all subregions of the UNECE in 2002. Total removals were almost 1.3 billion m^3, quite close to the record year of 2000. This increase demonstrates the ongoing recovery of the wood raw material markets, which is in line with heightened demand from sawnwood, panel and pulp manufacturing. The biggest changes were in the CIS and Other Europe, where removals were 6.5% and 7.9%, respectively, higher in 2002 than in 2001 because of strong demand for roundwood both in western Europe and Asia (table 4.1.1). While removal volumes in EU/EFTA and North America have been fairly stable during the past five years, Russia and many countries in Other Europe have substantially increased their harvesting levels during the same period due to expanding export opportunities. In fact, roundwood production in 2002 was almost 77% higher in the CIS and 24% higher in Other Europe, as compared to 1998 (graph 4.1.1).

In Europe (EU/EFTA and Other Europe combined), roundwood production was 412 million m^3 in 2002. Approximately 351 million m^3 was industrial roundwood, while an estimated 61 million m^3 was fuelwood (the components of wood raw materials may be found in figure 4.1.1 at the end of the chapter). Coniferous species accounted for 266 million m^3, or 76%, of the total industrial roundwood production. Softwood industrial roundwood has seen the biggest increase in removals in the UNECE region over the past few years. This has primarily been to supply an expanding sawnwood and woodpulp industry sector in the CIS and Other Europe. It appears that the oversupply from the 1999 storms, which felled 200 million m^3, the equivalent of a year's harvest in the affected countries, has finally been resolved[32].

TABLE 4.1.1

Roundwood balance in EU/EFTA, 2001-2002

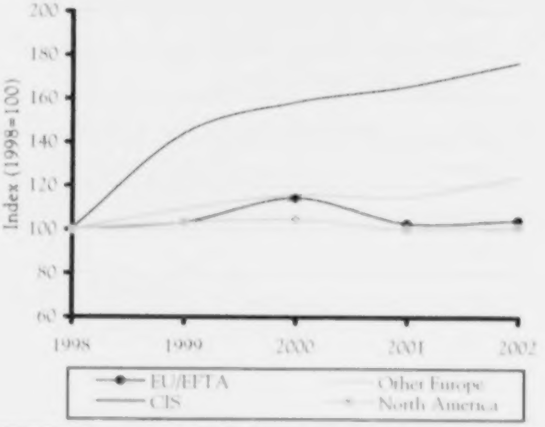
(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* %
Removals	273 645	277 627	1.5
Imports	56 539	54 627	-3.4
Exports	21 006	19 535	-7.0
Net trade	-35 533	-35 092	...
Apparent consumption	309 178	312 719	1.1

Source: UNECE/FAO TIMBER database, 2003

GRAPH 4.1.1

Removals of roundwood in the UNECE region, 1998-2002



Source: UNECE/FAO TIMBER database, 2003.

4.1.1.2 Roundwood trade

The UNECE region continues to be a net exporter of roundwood, and the trade surplus has more than doubled in five years. The total value of industrial roundwood exports in 2002 was estimated to be \$5.3 billion, which was \$170 million higher than in 2001. The major inter-regional industrial roundwood trade flows in the UNECE region are that of softwood and hardwood industrial roundwood exported from CIS and Other Europe to EU/EFTA (graph 4.1.2). The EU/EFTA subregion had a trade deficit of 35.1 million m^3 in 2002, while the CIS and Other Europe together had a trade surplus of 50.7 million m^3, as these latter subregions increased supply to the western European and Nordic countries. In addition, there have been major changes in eastern Russia, where exports from Siberia and Russia's Far East, as well as some other CIS countries, to Asia, especially China and Japan, have expanded in recent years.

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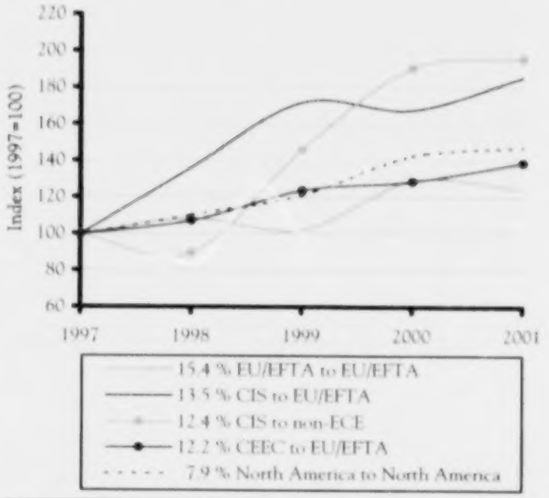
[32] "Effects of the December 1999 storms on European Timber Markets", *Forest Products Annual Market Review, 1999-2000*, chapter 3.

GRAPH 4.1.2

Major industrial trade flows in the UNECE region, 1997-2001



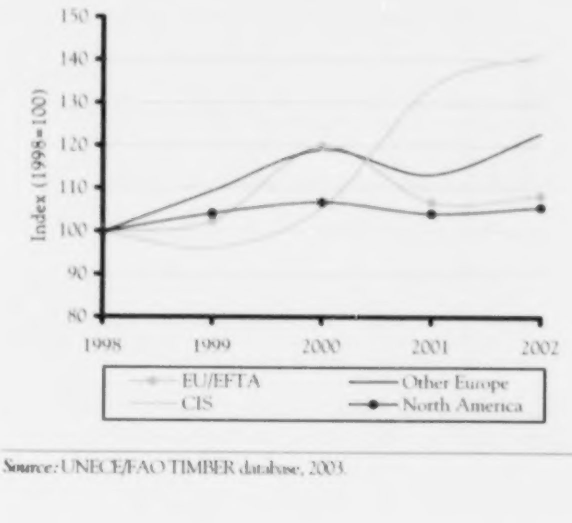
Note: Full trade flow table in the electronic annex. Figures are % of world trade.
Source: UN COMTRADE/EFI, 2003.

4.1.1.3 *Apparent consumption of roundwood*

Despite the weak economies in most countries in the UNECE region, consumption of roundwood increased by 1.4% in 2002, as compared to the previous year. Softwood industrial roundwood consumption increased by 2.3% while hardwood consumption rose only 0.7%. The biggest changes have been in the CIS and Other Europe, where the increases have ranged from 5 to 10% annually for the past five years, in line with growing production of panels, sawnwood and pulp (graphs 4.1.3 and 4.1.4).

GRAPH 4.1.3

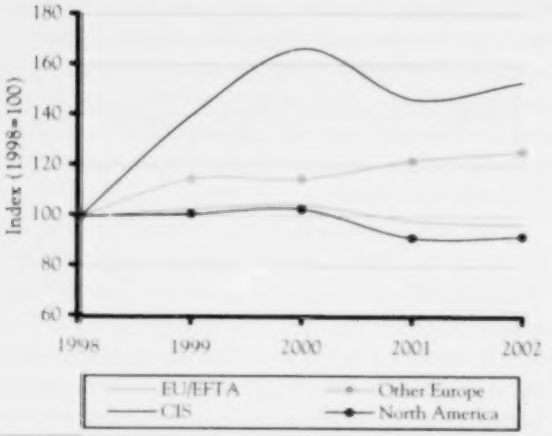
Consumption of softwood industrial roundwood in the UNECE region, 1998-2002



Source: UNECE/FAO TIMBER database, 2003.

GRAPH 4.1.4

Consumption of hardwood industrial roundwood in the UNECE region, 1998-2002



Source: UNECE/FAO TIMBER database, 2003.

The single largest forest sector which consumes softwood roundwood is the sawmilling industry, while the pulp industry is the largest consumer of hardwood roundwood. The plywood and composite board industries are estimated to use less than 10% of all roundwood consumed by the forest industry, in part because the panel industries are based on by-products.

4.1.1.4 *Consumption and trade of wood chips*

The major users of wood chips in Europe are the pulp and composite board manufacturing sectors, which consumed approximately 68 million m^3 in 2002. An estimated 55% was consumed by the pulp sector, 35% by the particle board industry and approximately 10% was used to manufacture MDF panels, based on data supplied by the Confederation of European Paper Industries (CEPI) and the European Panel Federation (EPF).

The UNECE region is a net exporter of wood chips (including residues and particles). The trade surplus can almost entirely be attributed to wood chips shipped from the United States and Canada to Japan. The EU/EFTA region had a 3.9 million m^3 wood chip trade deficit in 2002, which was largely filled by imports from Other Europe. Some additional volumes were imported for specific pulp characteristics. The major importers of wood chips in the UNECE region are Italy, Belgium, Finland, Canada, Germany, Austria and Norway, all of which, with the possible exceptions of Italy and Belgium, are also major roundwood producers and processors.

4.1.1.5 *Fuelwood consumption*

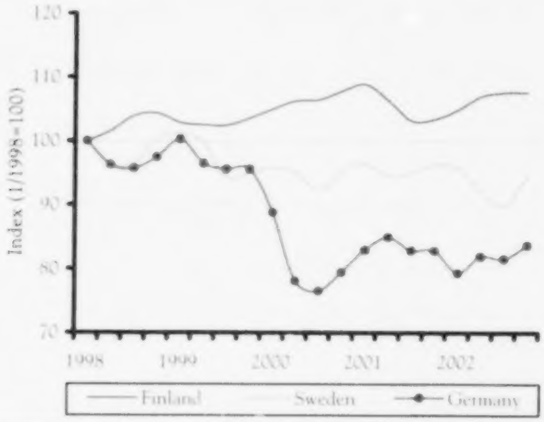
In 2002, approximately 15% of the total removals, or an estimated 189 million m^3, was used as fuelwood in the UNECE region. North America and the CIS region are the largest consumers of fuelwood, accounting for 69% of total use. In North America, consumption was practically unchanged from 2001, while demand in the CIS was up 1.9 million m^3, or 3.7%, in 2002. The EU/EFTA subregion also increased consumption to a record level of 32.1 million m^3.

According to a survey conducted by EUBIONET and published in 2003, the contribution of renewable energy sources (RES) represented 11.2% of the total EU primary energy production in 1999. The importance of RES varies widely between countries but was especially important in Sweden, Finland, Austria, Portugal and Denmark, where consumption ranged from 13% to 27% of total primary energy consumption.

It is estimated that energy from wood (firewood and forest industry by-products) accounted for approximately 58% of the renewable energy sources in the year 2000. France, Sweden and Finland were the largest producers of wood-based energy in the EU.

GRAPH 4.1.5

Delivered softwood sawlog prices in Europe, 1998-2002



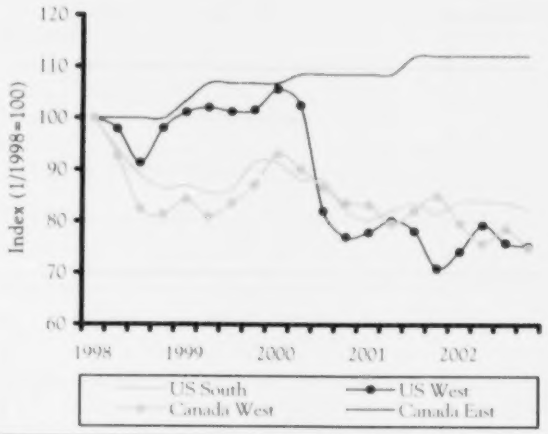
Note: Index based on delivered log price per m^3 (under bark) in local currency.
Source: *Wood Resource Quarterly*, Wood Resources International, 2003.

4.1.1.6 *Raw material costs*

Raw material costs for sawmills, as well as for pulpmills, fell in many markets within the UNECE region during 2002. The decline was due partly to an oversupply of raw material, as well as to lower market prices for manufactured forest products, including sawnwood, wood panels, pulp and paper.

GRAPH 4.1.6

Delivered softwood sawlogs prices in North America, 1998-2002

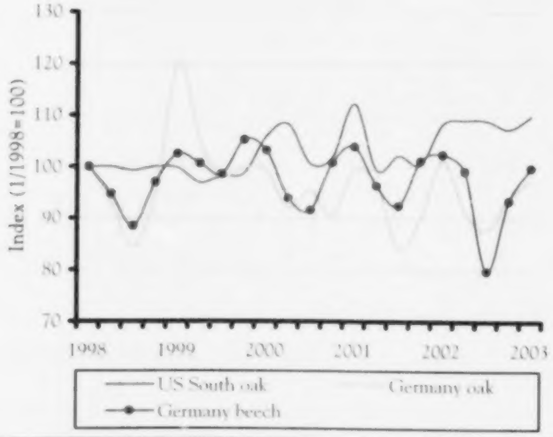


Note: Index based on delivered log price per m^3 (under bark) in local currency.
Source: *Wood Resource Quarterly*, Wood Resources International, 2003.

Over the past five years, delivered softwood sawlog prices have fallen between 10 and 20% in most regions of Europe and North America, partly due to declining prices of commodity lumber products (graphs 4.1.5 and 4.1.6). Hardwood sawlog prices in the United States and Germany, on the other hand, did not change much from 2001 and have actually remained fairly stable over the past few years. The hardwood market is more specialized than the softwood market, and prices for finished products have not declined to the same degree (graph 4.1.7).

GRAPH 4.1.7

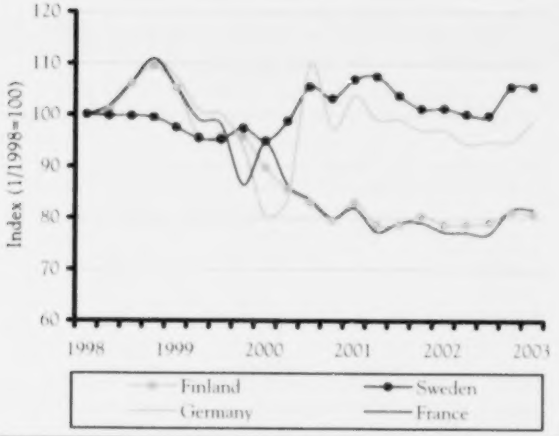
Delivered hardwood sawlog prices, 1998-2003



Note: Index based on delivered log price per m^3 (under bark) in local currency.
Sources: US South, *Timber Mart-South* and Germany, ZMP, 2003.

GRAPH 4.1.8

Delivered softwood pulplog prices in Europe, 1998-2003

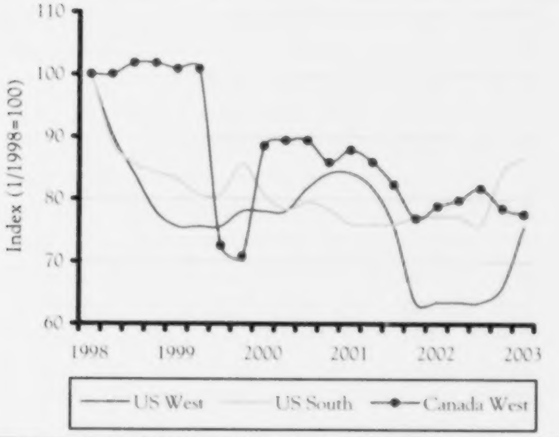


Note: Index based on delivered log price, oven-dry metric tons, in local currency.
Source: *Wood Resource Quarterly*, Wood Resources International, 2003.

Wood fibre costs for the pulp industry in Europe and North America have, with a few exceptions, seen a declining trend during the 1998 to 2002 period. Softwood pulplog delivered costs were, for many regions, more than 20% lower in 2002, as compared to 1998 (graphs 4.1.8 and 4.1.9). Reduced prices mean less incentive for timber stand improvement operations, for example thinnings, causing further concern for the economic viability of the forest sector. Volumes of recycled wood and wood chips from recycled wood are increasing due to rising landfill disposal costs, which are also depressing the market for fibre from initial thinnings in western Europe and the United States. The lower wood costs are partly a reflection of increased availability of softwood residual chips from an expanding lumber sector in many regions.

GRAPH 4.1.9

Delivered softwood pulplog prices in North America, 1998-2003



Note: Index based on delivered log, oven-dry metric tons, in local currency.
Source: *Wood Resource Quarterly*, Wood Resources International, 2003.

The Swedish and German markets, with a high percentage of small private ownership and fairly strong landowner associations, are the exceptions, with practically unchanged prices since the late 1990's. While this is not proof of any weakness in German and Swedish forest industries, it has forced the industry to focus on cutting costs through improved efficiencies in the forest-industry chain, e.g. by optimizing the logistics component. In this respect some Swedish companies are ahead of the North American companies. More rationalization of the industry may occur in North America.

Are energy market demands for wood raw material affecting pulplog costs? Perhaps not for pulpwood, but in some local situations, the availability and cost of residual chips has been affected. For example, last winter, which was extremely cold in the Nordic countries, the pulp industry complained about the subsidized energy sector "stealing" chips from the pulpmills. Chip prices increased in southern Sweden last winter when the energy sector was desperate for fuel.

Traditionally, the Swedish energy sector is based on branches, tops and pre-commercial sized trees, which are not of interest to the pulp industry. Forest owners have benefited from the developing market for formerly pre-commercial thinnings and salvage materials from harvesting operations. While in some cases the owner is not paid for these residues, their free removal hastens timber stand improvement operations.

4.1.2 *EU/EFTA subregion*

The EU/EFTA continues to be a net importer of roundwood. In 2002, the region imported 55 million m^3 of roundwood (including intra-regional trade), of which almost 50% were imports to the Nordic countries, mostly of pulpwood from Russia and the Baltic States. Other major importing countries in Europe were Germany, Italy and Spain, with the latter two accounting for most imports of tropical roundwood to Europe. The value of imports to the EU/EFTA region in 2002 was almost $3 billion, which was slightly less than the annual average over the past five years, due to falling prices. According to data from FAO, this accounts for approximately one third of the global trade of roundwood.

Removals in western Europe, especially France, Germany, Switzerland and Denmark, have now resumed more normal patterns, indicating that the oversupply in markets caused by the severe windstorms of December 1999 have been absorbed.

4.1.3 *Other Europe subregion*

The biggest changes in roundwood harvests and trade in the UNECE region have come in eastern European countries (table 4.1.2). Harvests of both softwood and hardwood industrial roundwood have increased by 26% in 5 years, in part to feed domestic industries expansion, and in part for growing exports to EU/EFTA. In 2002, a fairly large share of the removals in this region, approximately 15%, was exported to sawmills and pulpmills in Austria, Germany, Italy, and the Nordic countries. Latvia, Estonia and the Czech Republic were the major roundwood exporting countries in the subregion.

TABLE 4.1.2

Roundwood balance in Other Europe, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* %
Removals	125 385	135 339	7.9
Imports	6 672	5 259	-21.2
Exports	16 649	16 836	1.1
Net trade	9 977	11 577	16.0
Apparent consumption	115 408	123 762	7.2

Source: UNECE/FAO TIMBER database, 2003.

4.1.4 *CIS subregion*

The estimated total removals in the CIS subregion increased by as much as 8.0 million m^3 between 2001 and 2002 of which a majority was in the Russian Federation (table 4.1.3). The improved roundwood market was due to both higher consumption of industrial roundwood and fuelwood within the region, and the expansion of industrial roundwood sales to Europe and Asia. The Russian Federation's exports were approximately 4.6 million m^3 higher in 2002 than in the previous year. Belarus' roundwood exports also grew by over 20.7% to 1.3 million m^3.

The removals of roundwood in CIS have increased by 72% from 110 million m^3 in 1998 to 189 million m^3 in 2002, mostly because of the recovery in the Russian forest products sector, driven by export demand, both for roundwood and products. The biggest change has been that of softwood industrial roundwood, which was up from 57.7 million m^3 in 1998 to nearly 100 million m^3 in 2002. However, domestic consumption of roundwood has also increased by 20% over 4 years. Domestic consumption of hardwood industrial roundwood has increased by almost 11% on an annual basis for the past 5 years, while consumption of softwood roundwood has increased slightly less quickly, or 8.3% annually, since 1998.

TABLE 4.1.3

Roundwood balance in Russian Federation, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* %
Removals	164 700	172 200	4.6
Imports	645	806	25.0
Exports	32 893	37 486	14.0
Net trade	32 248	36 680	13.7
Apparent consumption	132 452	135 520	2.3

Source: UNECE/FAO TIMBER database and Timber Committee, 2003.

The Russian Federation continues to be a major exporter of roundwood and an important supplier of softwood sawlogs and birch pulp logs to the industry in the Nordic countries. More than half of Russia's exports are from the provinces in western Russia, while approximately 46% of exports in 2002 were from Siberia and the Russian Far East, to Japan, China and South Korea. The Russian Federation has continuously increased investment in infrastructure and in manufacturing facilities, due in part to foreign investment encouraged by more liberal policies, allowing the country to increase both domestic forest products production and the exports of industrial roundwood. Sales of industrial roundwood to the international market, valued at $1.7 billion, have increased by almost 72% since 1998; there is, however, an acknowledged, though unquantified, problem of illegal logging and export.

4.1.5 *North America subregion*

Although removals in the United States increased slightly in 2002, reaching 478 million m^3 over the past year, harvesting levels were actually more than 3%, or 20 million m^3, lower than they were 5 years ago (table 4.1.4). This long-term downward trend is a combination of 3 factors: Declining demand for industrial roundwood by the domestic industry in the United States, shrinking exports, and higher industrial roundwood imports from Canada (partly from Canadian operations owned wholly or in part by United States firms).

North America continues to be a net exporter of industrial roundwood and the trade surplus was 5.5 million m^3 in 2002. A majority of the exports are softwood industrial roundwood shipped from the western United States to Japan. Consumption of softwood industrial roundwood has seen an annual increase of

1.2% over the past five years, while demand for hardwood has declined by approximately 1.6% per year. The decline can be attributed to both a shrinking furniture industry in the United States and a smaller hardwood-consuming pulp sector. In contrast, consumption of hardwood industrial roundwood in Canada has increased, mainly due to expanding OSB capacity.

TABLE 4.1.4

Roundwood balance in North America, 2001-2002

(1,000 m³)

	2001	*2002*	*Change 2001 to 2002* *%*
Removals	671 354	678 147	1.0
Imports	14 124	14 413	2.0
Exports	20 745	19 877	-4.2
Net trade	6 621	5 463	-17.5
Apparent consumption	664 733	672 684	1.2

Source: UNECE/FAO TIMBER database, 2003.

4.2 Trends in 2003 and forecasts for 2004

The following analysis for 2003 and 2004 is based on the Timber Committee Market Discussions held in October 2003. Sources of information include countries' forecasts for wood raw materials markets in 2003 and 2004, along with updates for 2002 statistics, country market statements, expert presentations, the Committee's official market statement and information from the open discussion.

4.2.1 EU/EFTA *subregion*

Removals of industrial roundwood in the EU/EFTA are forecast to grow by 2.2% in 2003 and by 0.6% in 2004 (table 4.2.1). Despite the annual increases, log production in 2004 will still not reach the record levels of the year 2000. More than half of the increase in removals in 2003 in EU/EFTA is in Sweden alone. The demand for logs by the domestic forest industry is expected to be strongest in the sawmilling sector driven by increased domestic demand for sawn softwood.

Other major roundwood producers such as Germany, France and Austria predict only modest increases in 2003-2004, while removals in Finland are forecast to decline somewhat owing to both lower domestic demand for forest products and lower exports of sawn softwood in 2003.

Exports of roundwood from the EU/EFTA are expected to decline by approximately 2% in 2003 and remain unchanged in 2004. Consumption of softwood roundwood is forecast to increase in the subregion, while hardwood remains steady (graphs 4.2.1 and 4.2.2).

TABLE 4.2.1

Roundwood balance forecast in EU/EFTA, 2003-2004

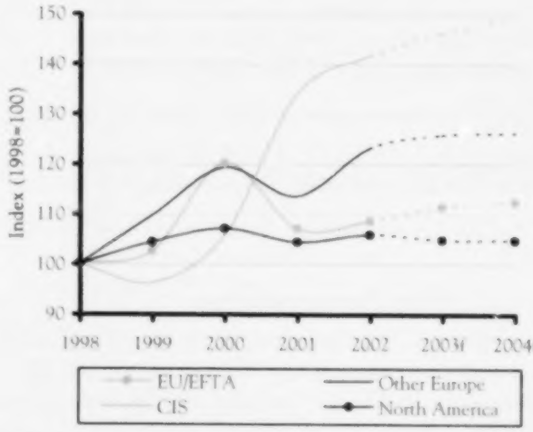
(1,000 m³)

	2003	*2004*	*Change 2003 to 2004* *%*
Production	241 682	243 057	0.6
Imports	44 169	45 356	2.7
Exports	16 628	16 637	0.1
Net trade	-27 541	-28 720	…
Apparent consumption	269 224	271 776	0.9

Source: Forecasts made at UNECE Timber Committee, October 2003.

GRAPH 4.2.1

Consumption of softwood industrial roundwood in the UNECE region, 1998-2004

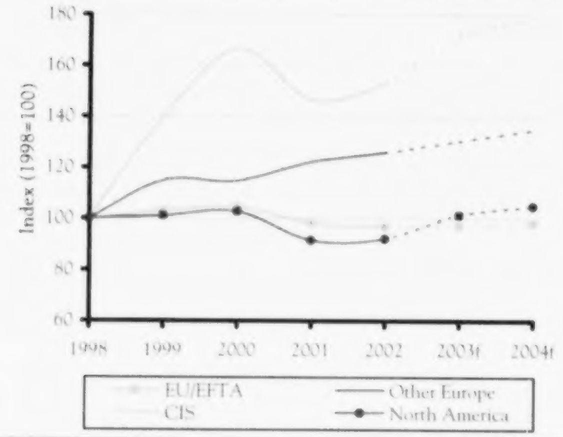


Note: f = Timber Committee's forecast trends for 2003 and 2004, made at the October 2003 session, were applied to the 2002 figure.

Sources: UNECE/FAO TIMBER database, 2003, and Timber Committee forecasts, 2003.

GRAPH 4.2.2

Consumption of hardwood industrial roundwood in the UNECE region, 1998-2004



Note: f = Timber Committee's forecast trends for 2003 and 2004, made at the October 2003 session, were applied to the 2002 figure.

Sources: UNECE/FAO TIMBER database, 2003, and Timber Committee forecasts, 2003.

TABLE 4.2.2

Roundwood balance forecast in Other Europe, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* %
Production	95 751	97 050	1.4
Imports	5 103	5 222	2.3
Exports	13 083	13 270	1.4
Net trade	7 980	8 048	0.9
Apparent consumption	87 771	89 002	1.4

Source: Forecasts made at UNECE Timber Committee, October 2003.

4.2.2 *Other Europe subregion*

Industrial roundwood removals in Other Europe are predicted to increase by approximately 1% per year during the 2003-2004 period with removals increasing the most in the Czech Republic, Poland and Romania (table 4.2.2). In the Baltic States roundwood production is actually being forecasted to be lower in 2004 than in 2002 due to expected weaker demand for pulp logs in the export markets of Germany and the Nordic countries.

Consumption of roundwood is forecasted to grow faster than production in many eastern countries of Europe. As a result exports will decline by more than 7% in 2003 compared to 2002, and imports are expected to increase by almost 14%. Much of the imports are likely to be from Russia, Ukraine and Belarus.

4.2.3 *Russian Federation*

Consumption of industrial roundwood in Russia is forecasted to increase by as much as 7.5% in 2003 and another 3.1% in 2004 (table 4.2.3). This rise will be driven mainly by higher domestic consumption of both solid wood products and paper products. Roundwood production will grow more slowly than the demand for logs, resulting in a reduction of available raw material for the export market. According to official forecasts, export volumes are estimated to decline 2.2% in 2003 and 1.1% in 2004.

In addition to increased demand for logs to manufacture sawnwood for the domestic market, many sawmills in western Russia are also predicted to continue expanding exports to European markets. Sawnwood exports in 2004 are forecast to be almost 11% higher than in 2002.

TABLE 4.2.3

Roundwood balance forecast in Russian Federation, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* %
Production	117 880	119 950	1.8
Imports	820	850	3.7
Exports	35 500	35 000	-1.4
Net trade	34 680	34 150	-1.5
Apparent consumption	83 200	85 800	3.1

Source: Forecasts made at UNECE Timber Committee, October 2003.

4.2.4 *North America*

High demand for conifer sawlogs by the sawmill sector in both the United States and Canada is expected to continue in 2003 but weaken slightly in 2004 (table 4.2.4). Much of the strength in this sector is due to anticipated strong residential construction activities in both the United States and Canada. The other major log consuming sector, pulp and paper, is predicted to consume less roundwood in both 2003 and 2004 compared to 2002.

The declining trend of log export volumes from North America to Asia seen over the past 5 years is expected to continue, resulting in volumes 3% lower in 2004 than in 2002.

TABLE 4.2.4

Roundwood balance forecast in North American, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* %
Production	575 234	574 771	-0.1%
Imports	13 982	14 082	0.7%
Exports	13 980	13 827	-1.1%
Net trade	-2	-255	…
Apparent consumption	575 236	575 026	0.0%

Source: Forecasts made at UNECE Timber Committee, October 2003.

With slightly lower demand for logs by the forest industry in North America and for the export market, industrial roundwood production in North America is forecasted to be approximately 1% lower in 2003 than in 2002 and unchanged in 2004.

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4.4 Electronic annex tables for website only

4.4.1 Roundwood balance in the UNECE region, 1998-2002.

4.4.2 Roundwood removals in the UNECE region, 1998-2002.

4.4.3 Roundwood trade in the UNECE region, by volume, 1998-2002.

4.4.4 Roundwood trade in the UNECE region, by value, 1998-2002.

4.4.5 Major industrial roundwood trade flows in the UNECE region, 1997-2001.

4.4.6 Roundwood apparent consumption in the UNECE region, 1999-2002.

4.4.7 Wood residues, chips and particles trade in the UNECE region, by volume, 1998-2002.

4.4.8 Logs and pulpwood balance in the UNECE region forecast, 2002-2004.

4.4.9 Industrial wood in the rough removals of softwoods and hardwoods in the rough in the UNECE region, 2002-2004.

4.4.10 Softwood Industrial wood in the rough removals in the UNECE region, 2002-2004.

4.4.11 Hardwood Industrial wood in the rough removals in the UNECE region, 2002-2004.

4.4.12 Softwood logs apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

4.4.13 Hardwood logs apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

4.4.14 Hardwood logs (temperate) apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

4.4.15 Hardwood logs (tropical) apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

4.4.16 Pulpwood apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

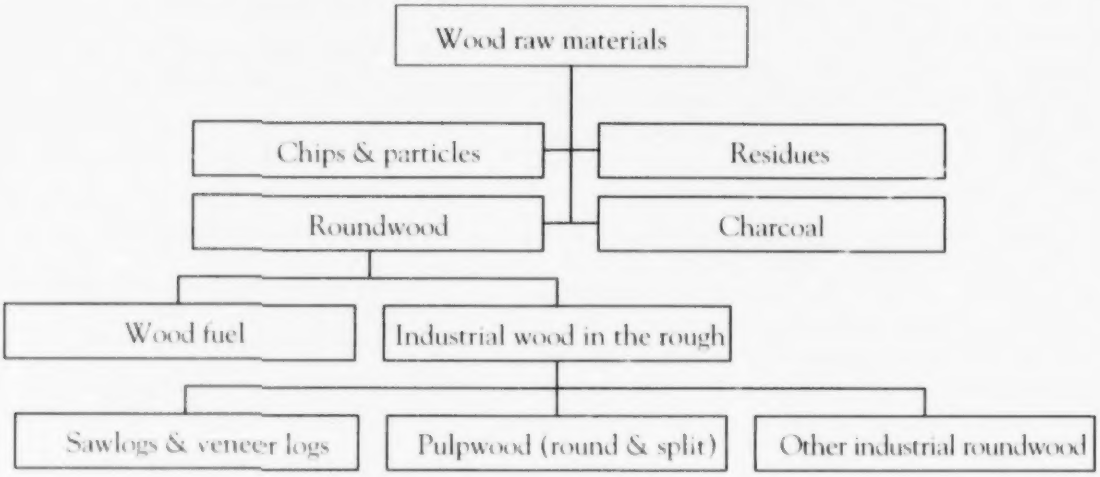
4.4.17 Softwood pulpwood apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

4.4.18 Hardwood pulpwood apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

4.4.19 Wood residues, chips and particles apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

FIGURE 4.1.1

Wood raw materials components


Wood raw materials
Chips & particles
Residues
Roundwood
Charcoal
Wood fuel
Industrial wood in the rough
Sawlogs & veneer logs
Pulpwood (round & split)
Other industrial roundwood

Source: UNECE and FAO forest products terminology, 2003.

Chapter 5

Globalization revolutionizing sawn softwood markets in 2002-2004[33]

Highlights

- Globalization is rapidly changing the production, consumption and trade dynamics of sawn softwood as new producers emerge and scale up production, leading to a world oversupply of sawn softwood.
- Spurred on by a positive economic outlook, especially in the CIS countries, sawn softwood production, consumption and trade forecasts are generally on the rise into 2004 in each of the UNECE subregions.
- The recent competitive price advantages that many sawn softwood producing regions have enjoyed in recent years are disappearing as many currencies, notably the euro, appreciate against the United States dollar.
- Demand for sawn softwood products in most regions of the UNECE remains strong, especially in North America, due to a surge in housing construction, but the possible bottoming out of mortgage rates in the United States signals a first warning of a change in conditions.
- The increased international flows of sawn softwood are also fuelling trade disputes, evidenced in 2002 by the United States imposing a duty of 27% on Canadian imports, which led to major disputes and appeals to world and regional trade bodies.
- More than ever, two regions of the world continue to have the potential to significantly influence the global market dynamics of sawn softwood: Russia (on the supply side with record exports) and China (on the demand side with record imports).
- Prices for sawnwood in North America were under pressure in 2002, but have begun to recover in mid-2003 as strong housing boosted demand, while the increasing burden of an appreciating currency dampened the Canadian supply.
- Prices for sawnwood in Europe rose steadily in 2002, but increasing supplies from eastern Europe are making it more difficult for suppliers in high-cost countries to compete, at least on commodity markets.
- Sawn softwood production increased by 6% overall in the UNECE region, rising in every subregion, and achieving record levels in 2002, and some of this volume was exported to North America, where imports hit their highest volumes ever.

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Secretariat introduction

We extend our sincere appreciation to the major authors and co-ordinators of this chapter, Dr. Rob Kozak, Associate Professor, University of British Columbia, Canada and Mr. Henry Spelter, Economist, USDA Forest Service. They have previously contributed to the *Forest Products Annual Market Reviews*, and they shaped their statistical analysis to fit within the new policy orientation of the publication. They ensured contributions from other marketing specialists, including Dr. Nikolai Burdin, General Director, NIPIEIlesprom, Russian Federation, and former Chairman of the UNECE Timber Committee, Dr. David Cohen, Associate Professor, University of British Columbia, Canada, and Mr. Arvydas Lebedys, Marketing Specialist and independent consultant, Lithuania, who is currently working for the FAO Forestry Department.

5.1 Trends in 2002 and 2003

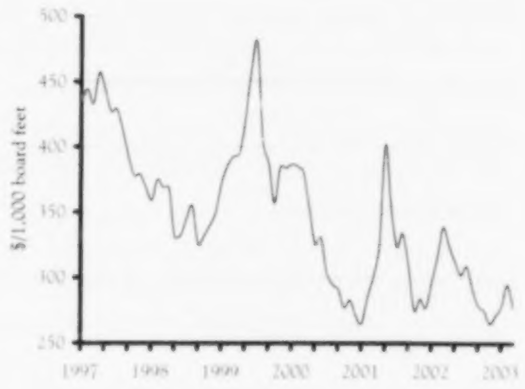
In the last few decades, the world has become a smaller place. The production, consumption and trade of sawn softwood have been by no means immune from this trend towards globalization. What was a relatively uncomplicated and stable sector 20 years ago has now become a complex network of international players, each operating on razor thin profit margins in the largely commodity-oriented sawn softwood markets. New and emerging producers are having a significant impact on sawn softwood production, which has contributed to an oversupply situation.

Undoubtedly, global currency rates are one of the most important factors influencing the import and export patterns of sawn softwood. Most notably, the period between 1997 and 2001 saw the currencies of all of the major sawn softwood exporting regions depreciate against the United States dollar (see graph in chapter 3). This has led to distinct competitive advantages, based largely on price, for many softwood-producing regions such as Canada, Europe and Oceania. The dynamics of the resulting trade patterns are complicated, but certainly this general trend in currency rates has led to a strengthening of the competitive positions for many global exporters of sawn softwood in the United States market. This trend may be reversed in 2003 with the fall in the United States dollar[14].

Invariably, this oversupply situation has created trade tensions. In particular, United States producers initiated a complaint against Canada in 2001 that resulted in the levying of 27% tariffs on most Canadian sawn softwood exports to the United States in May of 2002. This was expected to curtail Canadian exports, but the tariffs were challenged in world and regional trade bodies. Initial rulings in favour of Canada encouraged Canadian producers to assume that the tariffs would eventually be rescinded and the funds returned; thus they largely ignored the tariffs and increased exports. This led to severely oversupplied sawnwood markets in North America and weak pricing in 2002 that extended into early 2003 (graph 5.1.1). Not until the strengthening of the Canadian dollar in the first half of 2003 did the growth of exports reverse, allowing a partial rebound in prices. In July 2003 the North American Free Trade Agreement (NAFTA) panel reviewing one portion of the tariffs (the 8% dumping component) ruled in favour of the United States. However, a second panel reviewing the larger countervailing duty component (19%) in August made a determination that seemed to favour Canada, but left some ambiguity with respect to how the United States Department of Commerce should recalculate the tariff. Likely appeals, however, could leave the issue in doubt until, possibly, as late as 2006. In the meantime, North America is currently faced with an imminent timber oversupply crisis, as producers in British Columbia scramble to find uses for millions of cubic metres of mountain pine beetle killed softwood that is discoloured, but structurally sound[15].

GRAPH 5.1.1

North American composite sawn softwood prices, 1997-2003



Source: *Random Lengths Yardstick, 2003.*

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[14] Global Currencies – Strong United States Dollar Creates Winners at America's Expense. *Wood Markets* Monthly, 8(3):1, April 2003.

[15] British Columbia Ministry of Forests (2003). http://www.for.gov.bc.ca/hfp/bark_beetles/

With reductions in trade barriers and shipping costs, exchange rates are increasingly becoming decisive in world trade flows. All of the exporting regions whose currencies depreciated between 1997 and 2001 also saw currency appreciation, in some cases significantly, in 2003. To complicate matters even more, major importing regions are also witnessing strengthening currencies. For example, the strengthening of the Japanese yen against the dollar, but not the euro, has currently led to increased exports by North and South American producers at the expense of European producers (who managed to capture significant market share between 1997 and 2001)[36]. These currency upswings appear to be moving unabated into 2003, with significant gains being made against the United States dollar by the Canadian and New Zealand dollars, the Swedish krona and the euro[37] [38]. That said, Chilean and Brazilian currencies are still exhibiting downward trends, the former being of tremendous interest, as large volumes are nearing commercial maturity and expected to come online within the next decade. Meanwhile, the Russian ruble languishes, currently sitting at less than 20% of its 1997 value.

With respect to Russia, the impact of its weak currency is compounded by the sheer abundance of its low-cost coniferous forest resources. The current situation in Russia has the potential to significantly influence the global trade of sawn softwood, especially in neighbouring Europe and Asia. Evidence currently points to an increasing production capacity in Russia and the automation of primary breakdown, value-added and drying processes[39]. This is especially salient in the light of the fact that Russia's current production levels are well below its annual allowable cut.

Russia's sawn softwood export boom can also be attributed to the growth of China's economy – the volume of sawn softwood exports from Russia to China has doubled in the period from 2000 to 2002[40]. China represents both an interesting market opportunity for lumber producers around the world as well as a potential future competitor[41]. For the time being, success in the potentially huge Chinese sawn softwood market is contingent upon a solid understanding of Chinese business practices, a paradigm shift towards culturally appropriate wooden housing, and building code reform[42]. To date, China is importing roundwood, especially tropical, from many regions, but only Russia and New Zealand have made significant inroads into their sawn softwood market[43].

In the rest of the world, demand for sawn softwood products continues to be robust, reflecting in part the United States boom in housing construction. While still too early to tell, the efforts of the many generic wood promotional efforts and forest certification bodies around the world may be contributing to increased softwood demand.

5.1.1 EU/EFTA *subregion*

In Europe, much of the sawn softwood trade occurs within the continent, with the dynamics of the marketplace shifting substantially in recent years. Driven largely by market shortages and low inventories, sawn softwood prices (kiln-dried graded stock) steadily increased within the European continent throughout 2002 (graphs 5.1.2 and 5.1.3)[44]. However, western European producers of sawn softwood are finding it more and more difficult to compete in global markets with lower-cost, high output producers in eastern Europe, the Baltics and western Russia[45]. Companies in western Europe and Scandinavia are responding, in part, by purchasing Russian timber, or actively pursuing joint ventures with and acquisitions of Russian lumber producers[46]. For some time now, western European manufacturers have been moving away from a commodity approach into the production of specialty, value-added and engineered wood products[47].

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[36] Global Market Trends: 2003. Rising Global Output / Stable Demand Yield Buyers' Market. *WoodMarkets Monthly*, 8(3): 2-3, April 2003.

[37] Lumber Market Stalemate. *WoodMarkets Monthly*, 8(4): 1, May 2003.

[38] Currency Slide Could Push Prices Up Further. *TTJ* 19, 26 April 2003.

[39] Global Market Trends: 2003…

[40] Burdin, N. (2003). Personal communication, OAO "NIPIEllesprom".

[41] Cohen, D. (2003). Personal communication, University of British Columbia –Faculty of Forestry.

[42] Ibid.

[43] Global Market Trends: 2003…

[44] Currency Slide Could Push Prices Up Further. *TTJ* 19, 26 April 2003.

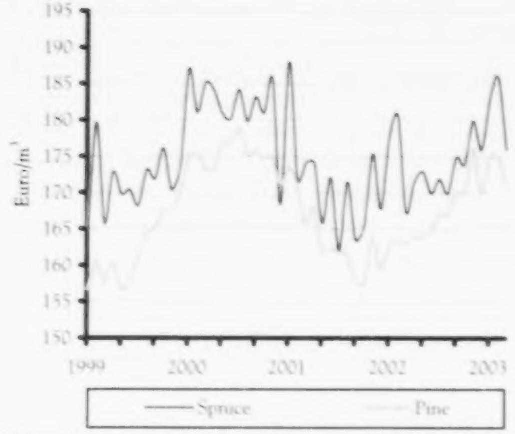
[45] Global Market Trends: 2003…

[46] Russia's Wood Industry (Part II) –Sawmill Capacity and Lumber Exports to Grow. *WoodMarkets Monthly*, 8(2): 4-5, March 2003.

[47] Global Market Trends: 2003…

GRAPH 5.1.2

Export prices for Finnish sawn softwood, 1999-2003

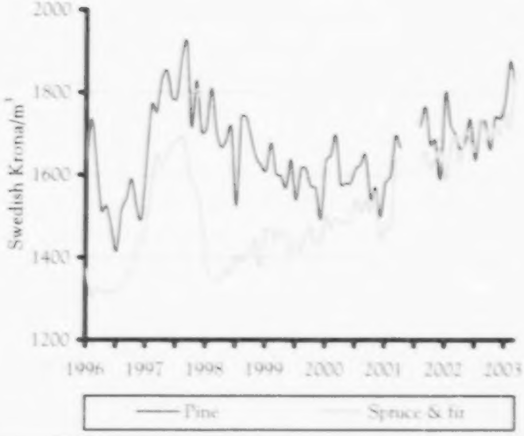


Source: Metinfo, Finnish Forest Research Institute, 2003.

In the EU/EFTA, as in every subregion, softwood production increased in 2002 over the previous year (table 5.1.1). There was a more moderate 1.4% increase in consumption (graph 5.1.4). Meanwhile, exporters were able to develop their markets (+5.5%), although it is not clear whether they will be able to maintain their gains under the new exchange rate.

GRAPH 5.1.3

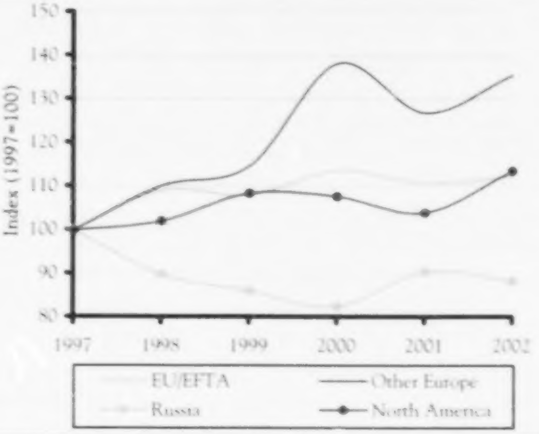
Sawn softwood prices in Sweden, 1997-2003



Source: Swedish Wood Exporters Association, 2003.

GRAPH 5.1.4

Apparent consumption of sawn softwood in the UNECE region, 1997-2002



Source: UNECE/FAO TIMBER database, 2003.

TABLE 5.1.1

Sawn softwood balance in EU/EFTA, 2001-2002

(1,000 m³)

	2001	*2002*	*Change 2001 to 2002* %
Production	74 545	76 264	2.3
Imports	34 316	35 435	3.3
Exports	31 898	33 661	5.5
Net trade	-2 418	-1 774	…
Apparent consumption	76 963	78 038	1.4

Source: UNECE/FAO TIMBER database, 2003.

5.1.2 *Other Europe subregion*

Consumption in the Other Europe subregion strengthened back towards its recent 2000 peak with an increase of 6.9% from 2001 to 2002 (table 5.1.2). Production also increased by a similar amount with the notable exceptions of three central European countries – the Czech Republic (-1.7%), Latvia (-3.0%) and Poland (-6.0%). Exports of the subregion remained relatively stable.

TABLE 5.1.2

Sawn softwood balance in Other Europe, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* *%*
Production	17 648	18 734	6.2
Imports	4 004	3 930	-1.9
Exports	8 997	9 142	1.6
Net trade	4 993	5 212	4.4
Apparent consumption	12 655	13 522	6.9

Source: UNECE/FAO TIMBER database, 2003.

In the Baltics, production is becoming more concentrated due to expanding capacities and greenfield projects financed mainly by foreign capital (e.g., Stora Enso, a major Nordic forest products corporation, recently took over the Estonian Sylvester's sawmilling business, and Stora Enso's capacities in the Baltic States now exceed 1 million m^3 of sawnwood[48].

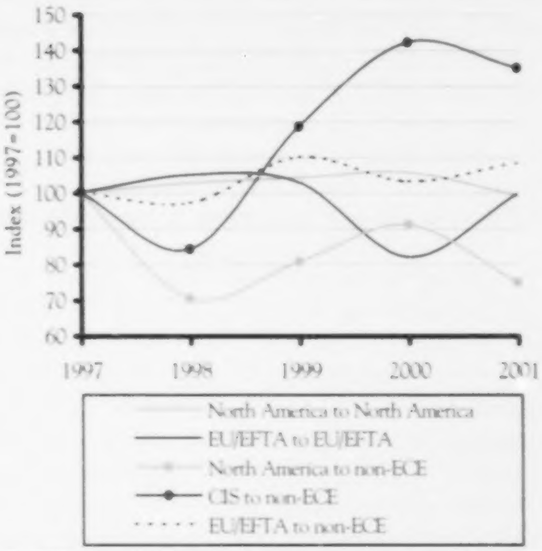
Government policies in eastern Europe do not influence the sawmilling business directly and there are no trade tariffs or other restrictions on sawn softwood imports or exports. Investments are driven by relatively low labour costs, good infrastructure, proximity to markets, ample wood resources, and economic and political stability (especially in EU accession countries). Perhaps the main concern for investors is government policy on wood resources utilization and availability.

5.1.3 *CIS subregion*

The volume of sawn softwood produced in Russia in 2002 increased by 5.4% over the previous year (table 5.1.3)[49]. Apparent consumption paradoxically decreased, which means that exports took a large upward turn of 17.1% to reach 8.6 million m^3. At 8.6 million m^3, Russia's exports have now exceeded those of the former USSR, which peaked at 8.4 million m^3 in 1976 (see discussion of EU/EFTA) (graph 5.1.5).

GRAPH 5.1.5

Major sawn softwood trade flows in the UNECE region, 1997-2001



Note: Full trade flow table in the electronic annex.
Source: UN COMTRADE/EFI, 2003.

TABLE 5.1.3

Sawn softwood balance in Russian Federation, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* *%*
Production	18 375	19 360	5.4
Imports	10	11	10.0
Exports	7 325	8 580	17.1
Net trade	7 315	8 569	17.1
Apparent consumption	11 060	10 791	-2.4

Source: UNECE/FAO TIMBER database, 2003.

5.1.4 North America

The markets for sawn softwood in North America continue to expand moderately, buoyed by a stronger than normal demand for housing, with continuing growth forecast until 2010[50]. This is contingent upon continued availability of the bargain financing terms that have characterized the recent past.

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[48] http://www.storaenso.com

[49] Burdin, N. (2003). Personal communication, OAO "NIPIEllesprom".

[50] United States Housing to Expand – Demographics Driving Longer-Term Demand for New Homes. *WoodMarkets Monthly*, 8(2): 1, March 2003.

Consumption in North America is particularly strong, with an increase of 9.2% from 2001 to 2002 (table 5.1.4). Production, although at a record level, was augmented by increased imports to satisfy needs. However, a decided turn in exchange rates in favour of exporting countries' currencies places a cloud of uncertainty over further growth of exports (see background discussion in section 5.1).

TABLE 5.1.4

Sawn softwood balance in North America, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* %
Production	105 454	113 768	7.9
Imports	34 195	36 218	5.9
Exports	36 736	37 555	2.2
Net trade	2 540	1 337	-47.4
Apparent consumption	102 914	112 431	9.2

Source: UNECE/FAO TIMBER database, 2003.

5.2 Trends in 2003 and forecasts for 2004

The following analysis for 2003 and 2004 is based on the Timber Committee Market Discussions held in October 2003. Sources of information include countries' forecasts for sawn softwood markets in 2003 and 2004, along with updates for 2002 statistics, country market statements, expert presentations, the Committee's official market statement and information from the open discussion.

5.2.1 *EU/EFTA subregion*

The EU/EFTA subregion of Europe is as of October 2003 in the midst of what could best be characterized as economic stagnation. Where sawn softwood products are concerned, this situation is exacerbated by currently weak markets for housing, furnishings and millwork, an appreciating euro against the dollar and the yen, generally slow economic growth in western Europe, increasing production from lower cost producing countries (notably in eastern Europe and CIS), and an unresolved oversupply situation. That said, a modest turnaround is expected in 2003 and 2004, with GDP growth for western Europe expected to be approximately 1.0% and 2.1%, respectively. In addition, sawn softwood prices have steadily risen in the EU/EFTA subregion and appear to be strengthening in the near term. This complex dynamic is reflected in the somewhat enigmatic production, consumption and trade forecasts for sawn softwood products within Europe over the next two years.

Most notably, production of sawn softwood is expected to increase through 2003 and 2004, with respective gains of 1.1% and 0.3% in each year (table 5.2.1 and graph 5.2.1). Imports are projected to decline marginally (0.2% and 0.1% in each year), while exports in 2004 are expected to return to their 2002 levels following a 0.6% decrease in 2003. Lastly, apparent consumption of sawn softwood products within the EU/EFTA subregion is expected to increase by 1.2% in 2003, holding steady in 2004. While the economic news is generally upbeat, the short-term forecasts are much lower than the across-the-board increases in production, imports, exports and apparent consumption seen in 2002.

TABLE 5.2.1

Sawn softwood balance forecast in EU/EFTA, 2003-2004

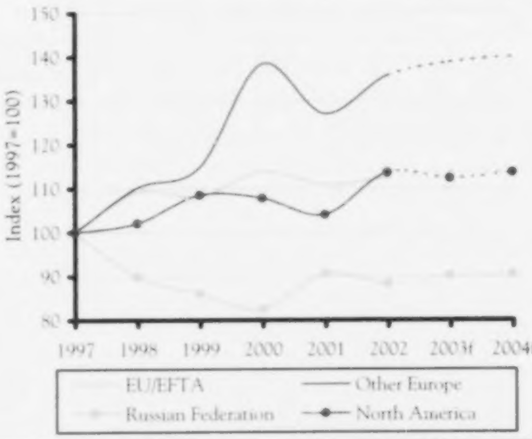
(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* %
Production	76 846	77 060	0.3
Imports	35 012	34 960	-0.1
Exports	32 969	33 165	0.6
Net trade	-2 043	-1 795	…
Apparent consumption	78 888	78 855	0.0

Source: Forecasts made at UNECE Timber Committee, October 2003.

GRAPH 5.2.1

Consumption of sawn softwood in the UNECE region, 1997-2004



Note: f = Timber Committee's forecast trends for 2003 and 2004, made at the October 2003 session, were applied to the 2002 figure.

Sources: UNECE/FAO TIMBER database, 2003, and Timber Committee forecasts, 2003.

Four EU/EFTA countries, Sweden, Germany, Finland and Austria, continue to dominate sawn softwood production in Europe, each accounting for between 10 and 17 million m^3 annually. In each of these countries, production and export levels of softwood lumber products are expected either to modestly increase or stabilize in 2003 and 2004. In Sweden, record production levels of sawn softwood in 2002 are likely to continue over the next two years. This supply is feeding both an increased domestic demand and rising levels of exports to countries outside of Europe (particularly Japan, the United States and Egypt). Currently in Finland, production of redwood products is stable, while whitewood production is on the rise. Again, this is partially a reflection of the growing importance of markets outside of Europe, especially Japan, which has increased their import levels from Finland by 23% over the last year. In both Germany and Austria, stagnation in the overall production of sawn softwood is expected in 2003 and 2004. However, increased levels of exports are expected from both of these countries over the next two years.

5.2.2 *Other Europe subregion*

The Other Europe subregion has traditionally been a net exporter of sawn softwood. This is expected to continue, but at a lower level owing to increased domestic consumption soaking up a greater portion of output. In 2004, production of sawn softwood is projected to be flat or slightly down, while net exports are expected to be almost 5% lower (table 5.2.2). Consequently, apparent domestic consumption is projected to increase, albeit by a miniscule amount, while exports fall. This change to a market driven by domestic demand rather than exports fits with the long-term outlook for the subregion.

TABLE 5.2.2

Sawn softwood balance forecast in Other Europe, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* *%*
Production	19 638	19 515	-0.6
Imports	3 838	3 993	4.0
Exports	9 399	9 304	-1.0
Net trade	5 561	5 311	-4.5
Apparent consumption	14 077	14 204	0.9

Source: Forecasts made at UNECE Timber Committee, October 2003.

5.2.3 *CIS subregion*

In 2003 and 2004, it is expected that the CIS subregion – primarily Russia, Belarus, and Ukraine – will continue to buck the global trend of general economic malaise and continue its robust growth. Most economic indicators point to sustained positive growth, exemplified by impressive projected gains in GDP of 6.2% and 5.1% in 2003 and 2004, respectively. In addition, economic conditions within which sawn softwood producers in the Russian Federation operate, will continue to be favourable. In particular, vast supplies of wood raw materials will continue to be readily available and labour costs will continue to be comparatively low. For these reasons, the sawmilling sector will probably remain both economically viable and globally competitive in 2003 and 2004, despite lower than average lumber prices.

Spurred on by a strengthening and resilient economy, production of sawn softwood in CIS countries is expected to grow by 3.6% in 2003 and by an additional 3.0% in 2004 (table 5.2.3). This should not be particularly surprising given that there currently exist over 30,000 sawmilling enterprises in the Russian Federation and an anticipated 1 million m^3 in production capacity is coming online in the near term. This dramatically increased production potential is the direct result of government policies which are conducive to foreign investment and joint ventures from corporate interests in Canada, Finland, Sweden and Switzerland, to name a few examples. In the near future, some of this increased volume will be met by domestic demand that is the result of Russian policy aimed at increasing lumber consumption through increased housing and industrial construction. However, growth of the CIS sawn softwood sector has been, and will continue to be, largely dependent on export markets.

TABLE 5.2.3

Sawn softwood balance forecast in Russian Federation, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* *%*
Production	17 510	18 040	3.0
Imports	12	12	0.0
Exports	9 050	9 550	5.5
Net trade	9 038	9 538	5.5
Apparent consumption	8 472	8 502	0.4

Source: Forecasts made at UNECE Timber Committee, October 2003.

Sawn softwood exports from the CIS subregion will continue to make impressive gains, up 5.1% and 5.5% in 2003 and 2004, respectively. In fact, at 2002 levels of nearly 8.6 million m^3, exports from the Russian Federation exceed those of the former USSR for the first time, a trend which is expected to continue in the short term. Currently, the major importers of soft sawnwood from the CIS subregion include Japan, China, Egypt, the United Kingdom, Germany, Italy, France and the Netherlands. That said, the regions experiencing the highest growth rates of sawn softwood imports from the Russian Federation are the other CIS countries and China. In the latter case, imports from the Russian Federation have doubled since 2000. In fact, at 8.7% of the total export volume, China is now tied with Japan as the primary export destination for CIS sawn softwood products.

5.2.4 *North America*

The subregion of North America is in the early phases of an economic upturn in late 2003. Substantial stimulus in the form of tax reductions and heavy government spending, particularly in the United States, are driving a rise in consumption and a milder comeback in the production of sawn softwood. The weakness in the United States currency vis-à-vis the euro, yen, Canadian and Australian dollars among others, have bolstered further the position of domestic producers. On the other hand, the rising budget deficit and the growing signs of recovery will continue to stimulate interest rate increases from earlier sub-basement levels. This will impact the extraordinarily strong home building activity of recent years. Early signs of waning activity have appeared in mortgage applications to buy homes, which have fallen significantly in the late Summer-early Autumn period of 2003, a trend unlikely to reverse in a rising rate environment.

These developments should lead to a mild slowdown in new home construction and repair and remodelling expenditures in 2004, resulting in lower demand for softwood sawnwood in those key sectors. A United States trade association forecasts housing starts in 2004 at 1.69 million units, down from the high level of nearly 1.75 million units in 2003. Likewise, lumber usage in the other major market of repair and remodelling is expected to decline by 3.3%. However, greater activity in other sectors benefiting from the general economic recovery should offset some of those losses, resulting in steady to only slightly lower overall consumption in the subregion (table 5.2.4). Lumber demand in the United States in 2003 is expected to hit an all-time high of 133.8 million m^3.

TABLE 5.2.4

Sawn softwood balance forecast in North American, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* %
Production	116 034	118 617	2.2
Imports	36 282	36 348	0.2
Exports	36 720	38 038	3.6
Net trade	438	1 690	285.9
Apparent consumption	115 596	116 927	1.2

Source: Forecasts made at UNECE Timber Committee, October 2003.

The rapid rise in imports from other UNECE subregions into the United States is likely to halt owing to projected weaknesses in the United States dollar with respect to the euro. Likewise, a stronger Canadian dollar will limit Canadian competitiveness in the United States market and result in flat to slightly smaller level of direct sawnwood exports. However, indirect exports of processed sawnwood, such as trusses, laminated beams, furniture components, pallets and similar items are likely to remain competitive, as long as the present level of United States tariffs on Canadian sawnwood imports is maintained.

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5.4 Electronic annex tables for website only

5.4.1. Sawn softwood balance in the UNECE region, 1998-2002.

5.4.2. Sawn softwood production in the UNECE region, 1998-2002.

5.4.3. Sawn softwood trade in the UNECE region, by volume, 1998-2002.

5.4.4. Sawn softwood trade in the UNECE region, by value, 1998-2002.

5.4.5. Major sawn softwood trade flows in the UNECE region, 1997-2001.

5.4.6. Sawn softwood apparent consumption in the UNECE region, 1999-2002.

5.4.7. Sawn softwood balance forecast in the UNECE region, 2002-2004.

5.4.8. Sawn softwood apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

Chapter 6

Sawn hardwood markets stabilize in 2002-2004[51]

Highlights

- The growth in exports of processed hardwood products from eastern Europe and Asia, notably China, is significantly affecting both the manufacture of hardwood products and also the trade in sawn hardwood, in Europe and especially in the United States.
- After a fall in 2001, sawn hardwood production remained at the same levels in 2002 in the UNECE region and is forecast to remain steady region-wide in 2003 and 2004.
- Apparent consumption of sawn hardwood fell 6% in 2002 in the major European markets (EU/EFTA subregion), but rose 6% in the Other Europe subregion, although the consumption in the EU/EFTA subregion remains double that in Other Europe, at 12 million m^3.
- Trade of hardwood dimension (semi-processed panels and parts) continues to grow, resulting in reduced sawnwood and log trade in the UNECE region.
- Romanian exports rose again, by 21% in 2002, nearly doubling over the last five years, in part as a result of government policies to promote foreign investment and trade.
- In contrast to most UNECE region countries, Romania forecasts stronger production in 2003 and 2004, with exports rising by 23% in 2004.
- After rising steadily, European Union consumption of hardwood flooring, a major market driver in the last years, levelled off in 2002.
- Demand from traders and manufacturers for certified sawn hardwood continued to grow in 2002 and 2003, but insufficient stock was available.
- Sawn hardwood markets are forecast to remain stable in 2004 with falls in United States production and export compensated by growth in eastern Europe.

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Secretariat introduction

We express our appreciation to Mr. Michael Buckley for once again authoring this analysis of the sawn hardwood markets. Formerly European Director of the American Hardwood Export Council (AHEC), Mr. Buckley consults on hardwood markets and has considerable experience both within and outside the UNECE region. We are equally grateful to Mr. David Venables, European Director of AHEC, for facilitating this chapter. Production of this chapter extends our collaboration with AHEC yet one more step. This chapter on sawn hardwood markets focuses on temperate hardwood developments, while a later chapter will address tropical timber markets.

6.1 Trends in 2002 and 2003

6.1.1 Introduction

Hardwood markets in 2002 and the first half of 2003 have been characterised by three important factors. First, there is a change in the structure of the hardwood trade, with imports of semi-finished and finished products replacing those of logs and sawnwood (table 6.1.1). Imports of both sawnwood and logs to the EU fell, with logs dropping more sharply than sawnwood.

TABLE 6.1.1

Comparison of European Union imports of sawn hardwood and logs, 2001-2002

(million euros)

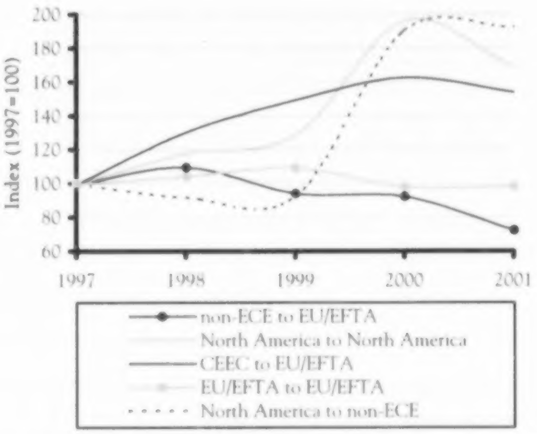
	2001	*2002*	*% Change 2001 to 2002*
Tropical logs	527.1	449.1	-15%
Beech logs	68.0	56.0	-18%
Oak logs	46.6	39.1	-16%
Other hardwood logs	603.9	584.3	-3%
Tropical sawn hardwood	1 293.4	1 156.1	-11%
Beech sawn hardwood	212.8	201.3	-5%
Oak sawn hardwood	497.4	468.8	-6%
Other sawn hardwood	631.7	579.2	-8%

Source: Eurostat, via *hardwoodmarkets.com*, 2002.

The fall in imports of logs and sawnwood gives a wrong impression of the true consumption of hardwood since many products, such as wooden furniture parts, are not separately identified in the customs codes, and thus the transfer of consumption of primary converted material into consumption of semi-finished and finished products cannot be measured accurately. There is no doubt, however, that the trend exists. The Malaysian Timber Council in Europe, for example, has stated that its objective is now to promote Malaysian wood (hardwood) products in preference to raw materials (sawnwood and logs). The growth in imports of hardwood products from eastern Europe and Asia, notably China, is significantly affecting both the manufacture of hardwood products and the trade in sawn hardwood in Europe and especially in the United States (graph 6.1.1). Semi-finished and finished hardwood products include rough-sized dimension, strips, edge-glued panels, finger-jointed parts and furniture parts.

GRAPH 6.1.1

Major sawn hardwood trade flows in the UNECE region, 1997-2001



Note: Full trade flow table in the electronic annex.
Source: UN COMTRADE/EFI, 2003.

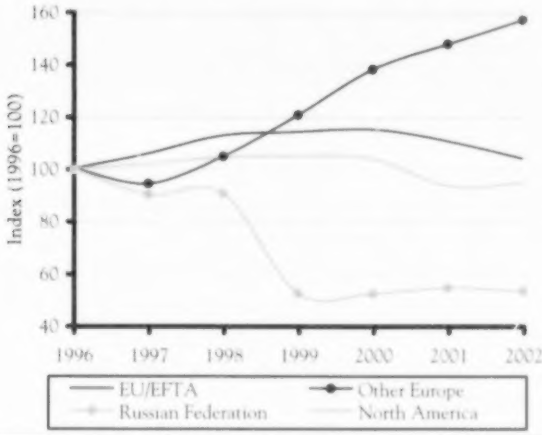
Second, there are discernible shifts in species preference, although, to date this statement is mainly supported by anecdotal evidence and not yet by market research. In particular, there is a measured return to darker species, after a decade or more of the blonde wood trend in Europe. This is manifest in greater consumer interest in tropical species, especially in hardwood flooring, despite a fall in volumes of imported tropical sawn hardwood, and in a return to oak after some recent lean years.

Third, the recent change in exchange rates between the United States dollar and the euro is causing some of the dynamics of the market to change, giving relief to United States exporters. United States exporters face increasing pressure from competition by European hardwood producers, most recently from large Italian firms, based primarily on imported hardwood from the Balkan countries. The Italian exports are not only to Europe but also to the United States.

Production in the UNECE region of sawn temperate hardwood in 2002 remained below the 2000 peak of 46.8 million m³ for the second year running. At 43.6 million m³ there was no significant change from 2001. Consumption remains below previous peaks, but is climbing rapidly in Other Europe (graph 6.1.2).

GRAPH 6.1.2

Consumption of sawn hardwood in the UNECE region, 1996-2002



Source: UNECE/FAO TIMBER database, 2003.

During 2002 and 2003 the pressure by environmental groups on consumers to demand only hardwood products independently certified as produced from sustainably managed forests has been matched by increased efforts by producers to offer such products. The Pan-European Forest Certification system (PEFC) and the Sustainable Forestry Initiative (SFI) have intensified their efforts to achieve global acceptance of their schemes (see chapter 9). However, to date, efforts to achieve agreement on mutual recognition of credible forest certification schemes, as one route to greater choice for consumers, have not succeeded. Nor is there a notable increase in the availability of certified products in sufficient ranges of species, grades or specifications in dry sawn hardwood stock. Most importers report limited interest by consumers and severely limited availability of material, which varies according to product type – and according to whether consumers are in the private or the public sector.

6.1.2 EU/EFTA subregion

Production fell by 7.7% in 2002, the third consecutive drop (table 6.1.2). EU/EFTA production was lower than in the Other Europe subregion by more than 1 million m³.

TABLE 6.1.2

Sawn hardwood balance in EU/EFTA, 2001-2002

(1,000 m³)

	2001	*2002*	*Change 2001 to 2002* *%*
Production	7 657	7 065	-7.7
Imports	7 621	7 319	-4.0
Exports	2 109	2 021	-4.1
Net trade	-5 513	-5 298	…
Apparent consumption	13 169	12 363	-6.1

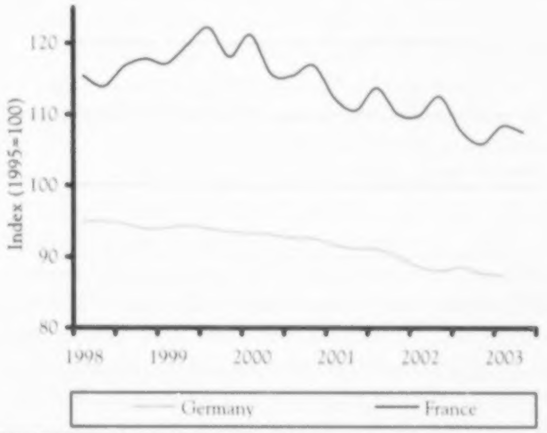
Source: UNECE/FAO TIMBER database, 2003.

Production of traditional hardwood sawnwood, mainly oak and beech, in both France and Germany, has reduced slightly in line with market demand. Hardwood prices continued to decline (graph 6.1.3).

It appears that imports of hardwood primary products – including logs, sawnwood, veneer and plywood – are falling, while imports of further processed products – including hardwood windows, doors and furniture – continue to rise. The newsletter *hardwoodmarkets.com* reports that EU imports of beech sawnwood were down by 5% between 2001 and 2002, oak sawnwood by 6% and other temperate sawn hardwood by 8%. By contrast, windows and frame imports were up by 15% and wooden furniture (most of which is not made from tropical wood) by 6%.

GRAPH 6.1.3

German and French beech sawnwood prices, 1998-2003

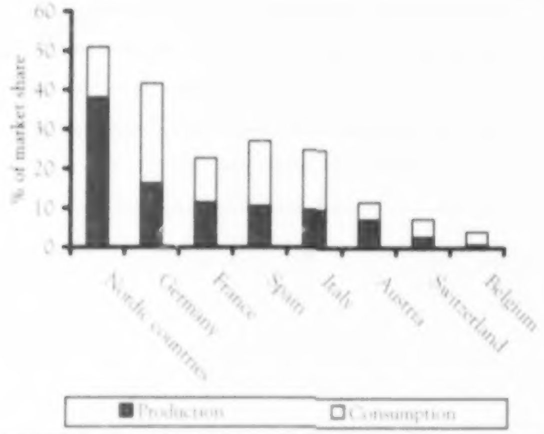


Sources: Statistisches Bundesamt and Centre d'Etudes de l'Economie du Bois, 2003.

The hardwood-flooring sector, which has been a growing product sector for fifteen years, finally slowed in 2001 and 2002. Data for 2002 by the European Federation of the Parquet Industry (FEP) shows that 2001 saw the first drop in EU production by 1.3% and in consumption by 2.2% (graph 6.1.4). In 2003 FEP forecasts the levelling off of the 2002 market with 0.7% growth in production, which still leaves it behind the peak of 2000. The market for 2002 in traditional FEP countries (i.e., not including four EU accession countries) was never expected to have shown growth in either production or consumption, with both new production (mainly in eastern Europe) and some mill closures keeping the market in balance. Production has dropped in every country except France, Italy and Spain. FEP still believes that the future of the parquet market is closely linked to the health of the construction market.

GRAPH 6.1.4

Flooring production and consumption market shares in the European Federation of the Parquet Industry member countries, 2002



Note: Approximately 99% hardwood, 1% softwood.
Source: European Federation of the Parquet Industry, 2003.

The consumption pattern of flooring is quite different from production. Consumption in Germany declined from a 27% European market share in 2001 to a share of 25%, whereas Spain rose from 15% in 2001 to 17% in 2002. Consumption rose significantly only in France, Italy and Spain – as in production. FEP also suggests that in Europe, oaks lead species preference with 47.9%, up from 46% in 2001, while beech held its position. All tropical species rose by 15% from a share of 13.9% to 16.0% in 2002. All other species individually are at 5% or below, except maple, which decreased by a 0.5% market share to 6.5%. Anecdotally it is obvious that this species balance may be changing significantly with an increased interest by the market in darker and tropical species.

6.1.3 *Other Europe subregion*

Production rose by 6.6% in Other European countries (table 6.1.3). The production increase in eastern Europe was due mainly to long-term growth in Romania, and partly due to growth in Turkey and Latvia. This appears to be due to a number of factors relating to the availability and quality of the wood resources and to Romanian policies, which facilitate production, investment and export. However, it is notable that production in Poland is showing a long-term downward trend, by 26% in the last four years.

TABLE 6.1.3

Sawn hardwood balance in Other Europe, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* %
Production	7 735	8 245	6.6
Imports	1 149	995	-13.4
Exports	3 215	3 216	0.0
Net trade	2 066	2 222	7.6
Apparent consumption	5 670	6 023	6.2

Source: UNECE/FAO TIMBER database, 2003.

The Other European countries' apparent consumption rose 6.2% in 2002. Exports rose 15% in Romania, Latvia and Lithuania (the lack of change at the subregional level is due to what appears to be an anomalous drop in Albania). Romanian exports rose by 21% in 2002, and are now almost double what they were in 1999. In 2002 Romanian hardwood exports (0.6 million m^3 in 2000 and in 2002) accounted for 19% of all non-EU/EFTA and CIS exports.

6.1.4 *CIS subregion*

Production in the CIS did not change significantly according to available statistics (table 6.1.4). Unfortunately, accurate data were unavailable from the Ukraine, which is an important producer of oak logs and sawnwood in the CIS.

TABLE 6.1.4

Sawn hardwood balance in the Russian Federation, 2001-2002

(1,000 m³)

	2001	*2002*	*Change 2001 to 2002* *%*
Russian Federation			
Production	2 625	2 640	0.6
Imports	5	5	0.0
Exports	375	440	17.3
Net trade	370	435	17.6
Apparent consumption	2 255	2 205	-2.2

Source: UNECE/FAO TIMBER database, 2003

6.1.5 North America

The United States is the largest single producer of temperate sawn hardwood in the world and the number one exporter to Europe. In 2002, according to the data submitted, production in the United States and Canada was unchanged in 2002 (table 6.1.5). Principal export species prices show differing trends, with red oak recovering in early 2003, hard maple exhibiting an upturn and white oak remaining steady (graph 6.1.5). Spain, Italy and the United Kingdom are respectively the largest markets in the EU for North American sawn hardwood, accounting for 64% of direct shipments to EU markets.

TABLE 6.1.5

Sawn hardwood balance in North America, 2001-2002

(1,000 m³)

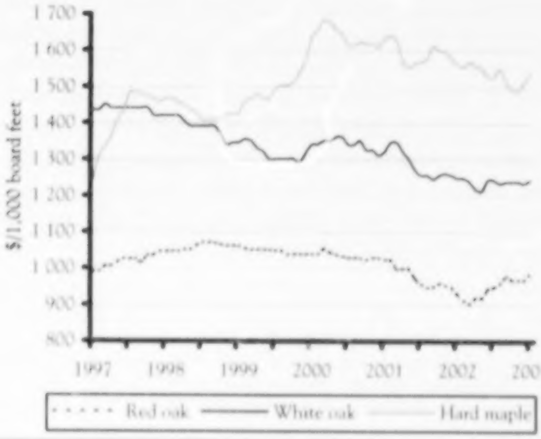
	2001	*2002*	*Change 2001 to 2002* *%*
Production	28 257	28 279	0.1
Imports	2 463	2 844	15.5
Exports	4 176	4 307	3.1
Net trade	1 713	1 463	-14.6
Apparent consumption	26 544	26 816	1.0

Source: UNECE/FAO TIMBER database, 2003.

In North America, production of 28.3 million m³ in 2002 remained well below its peak of 31.3 million m³ in 1999. Import trends are less easy to analyse. In 2002 they were running at approximately the same level as in 2001 for the region as a whole.

GRAPH 6.1.5

United States sawn hardwood prices, 1997-2003



Source: *Hardwood Review, 2003*

In the past two years, the United States, which represents about 58% of all temperate sawn hardwood production for the region, revised its previous production statistics downward. In the winter of 2002-2003, inclement weather forced reduced hardwood logging. Many sawmills, facing difficulty in buying logs, had to reduce production by temporary closures and by reducing production from two shifts to one. In any case, the two main markets are the EU, in which apparent consumption was reduced by 6.1%, and North America, which advanced by only 1% over 2001, based on the data provided.

6.2 Trends in 2003 and forecasts for 2004

Committee forecasts in October 2003 suggest that the apparent consumption of sawn hardwood for the UNECE region as a whole will continue to stabilize through 2004. Total apparent consumption in 2003 is estimated to be 45.4 million m³ and is forecast to remain at 45.5 million m³ in 2004. Total production is forecast to rise 6% in 2004 over the estimate for 2003, mainly due to increased production in the Other Europe subregion (4.4%) and the Russian Federation (2.9%). Both total production and total apparent consumption in 2004 are forecast to be slightly ahead of 2002 and 2003, again owing to increases in Other Europe.

The following analysis for 2003 and 2004 is based on the Timber Committee Market Discussions held in October 2003. Sources of information include countries' forecasts for sawn hardwood markets in 2003 and 2004, along with updates for 2002 statistics, country market statements, expert presentations, the Committee's official market statement and information from the open discussion.

6.2.1 EU/EFTA subregion

In the EU/EFTA subregion production and trade are forecast to be steady in 2004 with production and exports only slightly up (table 6.2.1). Apparent consumption would be 0.4% up on 2003 but still a little less than the level of 2002 (graph 6.2.1). Current reports appear to confirm a very difficult market for beech –Europe's main hardwood species –but improved trading conditions for oak. Darker species such as oak are coming into fashion in some countries, in part spurred by successful promotional campaigns, such as *J'ai choisi le chêne* (I chose oak) in France.

TABLE 6.2.1

Sawn hardwood balance forecast in EU/EFTA, 2003-2004

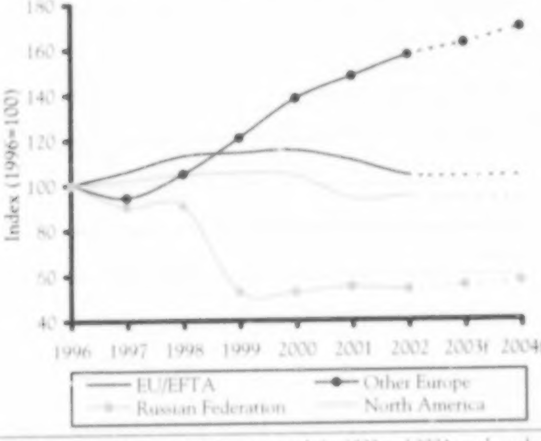
(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* %
Production	6 884	6 935	0.7
Imports	6 597	6 613	0.2
Exports	1 951	1 971	1.0
Net trade	-4 646	-4 642	…
Apparent consumption	11 530	11 577	0.4

Source: Forecasts made at UNECE Timber Committee, October 2003.

GRAPH 6.2.1

Consumption of sawn hardwood in the UNECE region, 1996-2004



Note: f = Timber Committee's forecast trends for 2003 and 2004, made at the October 2003 session, were applied to the 2002 figure.

Sources: UNECE/FAO TIMBER database, 2003, and Timber Committee forecasts, 2003.

6.2.2 Other Europe subregion

In Other Europe all forecast data show an increase with imports of sawn hardwood rising by 8.4%, based on improved forecasts of hardwood product sales for export and domestic consumption, and reflecting likely further increased wood processing capacity (table 6.2.2). Exports are forecast to be up 5.9% in 2004 over the estimated 1% increase in 2003. The exceptional growth of exports from Romania is partly due to the increase in GDP of 4.3% in the first half of 2003; significantly increased investment in infrastructure and added value production capacity; and in particular the increased production of sawn hardwood available for export, which accounts for 45% of Romanian sawn hardwood production.

TABLE 6.2.2

Sawn hardwood balance forecast in Other Europe, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* %
Production	8 294	8 660	4.4
Imports	1 025	1 111	8.4
Exports	3 249	3 441	5.9
Net trade	2 224	2 330	4.8
Apparent consumption	6 069	6 329	4.3

Source: Forecasts made at UNECE Timber Committee, October 2003.

6.2.3 CIS subregion

The Russian Federation, being the smallest sawn hardwood-producing subregion, is forecast to increase production by 2.9% but from a very small base –estimated to account for only 5% of total UNECE region sawn hardwood production in 2003 (table 6.2.3). Trade in sawn hardwood is forecast to remain static.

6.2.4 North America

In North America, which accounts for over 60% of the estimated total UNECE region production, apparent consumption is forecast to fall by 0.9% in 2004, for the second successive year. (table 6.2.4). This is reflected in production forecasts of reductions of 1.2% in 2003 and 0.8% in 2004. Exports are forecast to fall even faster, by 2.9% in 2004.

TABLE 6.2.3

Sawn hardwood balance forecast in Russian Federation, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* *%*
Production	2 390	2 460	2.9
Imports	5	5	0.0
Exports	450	450	0.0
Net trade	445	445	0.0
Apparent consumption	1 945	2 015	3.6

Source: Forecasts made at UNECE Timber Committee, October 2003.

TABLE 6.2.4

Sawn hardwood balance forecast in North American, 2003-2004

(1,000 m^3)

	2003	*2004*	*Change 2003 to 2004* *%*
Production	27 209	26 987	-0.8
Imports	2 950	2 819	-4.4
Exports	4 301	4 175	-2.9
Net trade	1 351	1 356	0.4
Apparent consumption	25 858	25 631	-0.9

Source: Forecasts made at UNECE Timber Committee, October 2003.

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6.4 Electronic annex tables for website only

6.4.1 Sawn hardwood balance in the UNECE region, 1998-2002.

6.4.2 Sawn hardwood production in the UNECE region, 1998-2002.

6.4.3 Sawn hardwood trade in the UNECE region, by volume, 1998-2002.

6.4.4 Sawn hardwood trade in the UNECE region, by value, 1998-2002.

6.4.5 Major sawn hardwood trade flows in the UNECE region, 1997-2001.

6.4.6 Sawn hardwood apparent consumption in the UNECE region, 1999-2002.

6.4.7 Sawn hardwood balance forecast in the UNECE region, 2002-2004.

6.4.8 Sawn hardwood apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

6.4.9 Sawn hardwood (temperate) apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

6.4.10 Sawn hardwood (tropical) apparent consumption, production, imports and exports forecasts in the UNECE region, 2002-2004.

Chapter 7

Panel production rising despite falling prices and current overcapacity:

Wood-based panels markets, 2002-2004[52]

Highlights

- Russian wood-based panels industry beating all growth records on the back of vigorous domestic demand.
- Other Europe subregion boosting the European medium density fibreboard (MDF) industry with massive growth in production.
- Other Europe subregion and the Russian Federation are rapidly expanding their export markets.
- North American panel industry picked up well after serious distress, but particle board overcapacity continues to overload the weak markets.
- A recent development in the North American structural panel sector is the rapid market share growth of newcomers, in part due to current exchange rates.
- Oriented strand board (OSB) exports from EU/EFTA climbed steeply as the fledgling industry found offshore markets.
- Low prices in Europe and North America cast a chill on the wood-based panels industry in 2002 and early 2003, however in late 2003 structural panel prices were rising rapidly in North America, achieving record highs for some panels.
- Plywood exports from outside the UNECE region continue to expand rapidly in Europe and North America.
- European wood-based panels industry anticipates competition with energy sector on raw wood supply, affecting primarily the particle board industry.
- During 2003 and 2004, with stagnating demand in Europe and North America, panel manufacturers will seek outlets abroad, as the home markets continue to deteriorate.
- In Europe, MDF and OSB are expected to offset partly the deferred recovery of the particle board industry.

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Secretariat introduction

We thank Ms. Eva Janssens, Economic Advisor from the European Panel Federation, for this analysis. She worked with Mr. Jorge Najera, Economics Officer, UNECE/FAO Timber Branch, on the statistics validation, and then drafted the following chapter. Ms. Janssens is a member of the UNECE/FAO Team of Specialists on Forest Products Markets and Marketing and used the EPF *Annual Report 2003* and its contributors in the different UNECE subregions to produce this chapter. We also express our appreciation to Mr. Najera who contributed to the analysis.

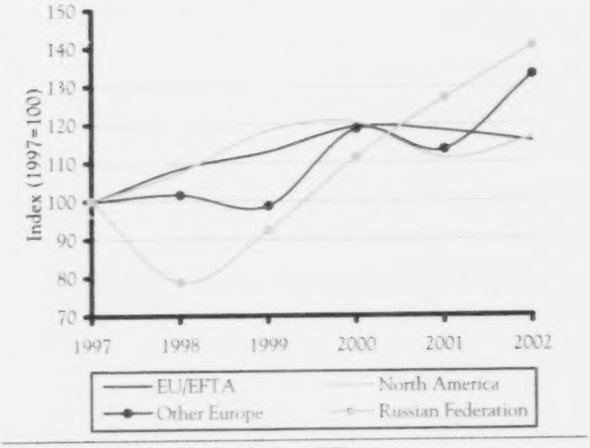
7.1. Trends in 2002 and 2003

7.1.1 *Introduction*

The results of the wood-based panels industry differed across countries and panel types, with MDF and OSB recording in general the most favourable developments. Despite the poor demand, overcapacity and depressed prices, in the EU/EFTA and Other Europe subregions as a whole, total wood-based panels consumption in 2002 set a new record level of 57.9 million m^3, 1% higher than in 2001 (graph 7.1.1). This result was mainly due to increased demand in the Other Europe subregion, where consumption went up by 17.4%, while it fell by 2.3% in the EU/EFTA subregion. In the Russian Federation, consumption in 2002 also increased by 10.7%, to 4.7 million m^3. In North America, thanks to the dynamic construction sector, overall wood-based panel consumption was also up by 4.7%, reaching 59.6 million m^3.

GRAPH 7.1.1

Consumption of wood-based panels in the UNECE region, 1997-2002

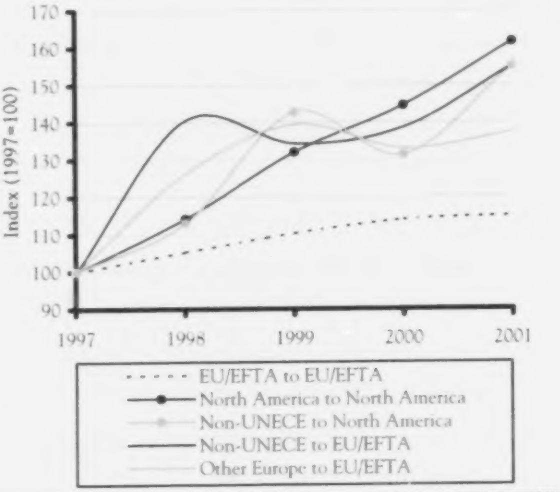


Source: UNECE/FAO TIMBER database, 2003.

Wood-based panel trade flows in Europe over the period 1997 to 2002 show increased exports from Other Europe to the EU/EFTA subregion, as the former group of countries continue to develop their production capacity in particle board, MDF and also OSB (graph 7.1.2). EU/EFTA and North American exports have stabilised in 2001 and 2002, following an increase since 1997. Russian Federation exports have sharply increased since 1998. Plywood exports from Indonesia, Malaysia, Brazil and most recently, China, to EU/EFTA and North America have also increased sharply during the last three years.

GRAPH 7.1.2

Major wood-based panel trade flows in the UNECE region, 1997-2001



Note: Full trade flow table in the electronic annex.
Source: UN COMTRADE/EFI, 2003.

The European wood-based panels producers are hoping for a continued improvement of market conditions in order to work further towards reaching full capacity and equilibrium between supply and demand. The main worry of the European panel producers is, however, the rising competition with the energy sector for the raw wood material, due to measures to promote wood energy. In Europe, the current policy of supporting the energy sector to use wood for energy production, coupled with difficult present market conditions, is affecting the profitability of the industry. According to the European Panel Federation, some panel mills have closed in Europe, in part due to rising raw material costs from competition with the energy sector.

7.1.2. EU/EFTA subregion

The European particle board industry was clearly affected by the number of mills that closed during 2002. Both production and consumption of particle board failed to reach the levels of 2001 (table 7.1.1). Particle board production within the EU/EFTA subregion amounted to 29.9 million m³, which represents a contraction of 0.2%. Consumption fell by over 2% to just 27.2 million m³. Exports, on the other hand, increased rather substantially, whereas imports faced a sharp decline. One of the effects of these changes in capacity was a rise in particle board prices from mid-2002 through mid-2003 (graph 7.1.3).

TABLE 7.1.1.

Wood-based panels balance in EU/EFTA, 2001-2002

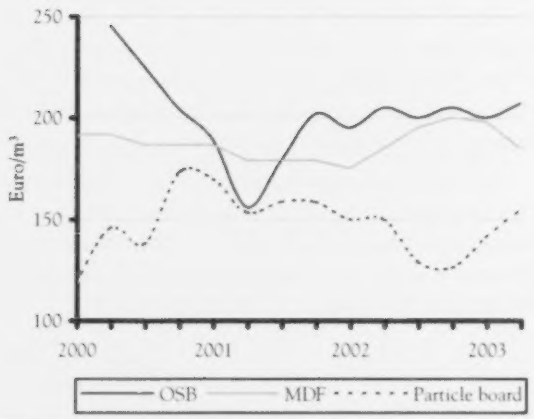
(1,000 m³)

	2001	*2002*	*Change 2001 to 2002* *%*
Production	45 551	46 664	2.4
Imports	19 933	19 949	0.1
Exports	18 975	21 191	11.7
Net trade	-959	1 242	...
Apparent consumption	46 510	45 422	-2.3

Source: UNECE/FAO TIMBER database 2003.

GRAPH 7.1.3

European OSB, MDF and particle board prices, 2000-2003



Notes: OSB/3 18mm, MDF standard 16-19mm, particle board V100 PF 19mm. Prices from Austria, Germany and Switzerland.
Source: EUWID Wood Products and Panels, 2003.

High growth rates were noted for OSB, which continued to grow massively, recording a 17% rise as

the total European consumption figure to 1.6 million m³ was recorded while European OSB exports doubled to over 1.1 million m³. Nevertheless, the OSB industry in the EU/EFTA countries is still confronted with low capacity utilisation rates and prices remaining lower than 2000 levels. The main applications in the EU/EFTA region for OSB are found in construction purposes (75%) such as wall sheathing, flooring and roof decking, as well as in packaging (20%) and furniture.

MDF passed the 8.5 million m³ threshold, easily reaching a record production level. The corresponding buoyant European demand for MDF was also reflected by the considerable decrease in overall stocks throughout the year 2002. The main driver for growth in MDF consumption continues to be the laminated flooring industry. MDF consumption increased marginally by 0.7% to 5.9 million m³, and was also spurred by a 9% increase in imports, while exports recorded an extraordinary upswing of 24%. In spite of these positive results, the MDF industry witnessed a drop in prices at the beginning of 2003.

Plywood production continued its strong performance and amounted to 3.4 million m³, despite the fact that demand contracted by 1%. The main engine behind growth in production was the sound 8.8% upswing in Finland, which still remains by far the largest European plywood producer. Finnish softwood plywood capacity expanded in 2002, and accounts for 58% of total output, while birch plywood is facing increased competition in export markets from Estonia and the Russian Federation. Finland is also the largest exporter in Europe; 90% of total production is exported. Plywood production from tropical species, concentrated in France, Greece, Italy, Portugal and Spain, faced serious problems during 2002, caused by rising competition with okoumé plywood imports from China. The European industry consequently took action against these dumping practices. Brazil exports of softwood plywood continued to gain market share.

Some countries exporting wood-based panels to Europe (mainly tropical plywood exports) have indicated that the CE Marking System[53], based on European Union Standard EN 13986[54], to be applied as of April 2004, could have a dramatic negative impact on tropical timber trade. Manufacturers will need to install quality control systems in their testing of products and use a certified testing laboratory with third-party auditing.

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[53] CE Marking is a mandatory mark for approximately 70% of the products sold on the EU market The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity".

[54] EN standards are issued by the European Committee for

For all panel types, the European manufacturers are increasingly worried about the increase in raw material costs. In particular, they feel that wood supplies are coming under increased demand because of the policy in many countries to promote the use of wood for the production of energy. The European Panel Federation, however, intensely defends and promotes the use of wood as a raw material for manufacturing in order to make full use of this raw material and produce excellent panels, before the energy industry can dispose of the wood at the end of its life cycle for the production of energy.

7.1.3 *Other Europe subregion*

The wood-based panels industry in the Other European countries is improving, particularly in the field of MDF, recording 46% production growth overall during 2002 (table 7.1.2). As in the EU/EFTA subregion the particle board industry in the Other Europe suffered from difficulties in the raw wood supply related to the competition with the energy sector, especially in Latvia and Lithuania. A general problem for the Romanian panels industry is purchasing the local wood raw material in sufficient quantities. It is estimated that the domestic resource can supply a production level of 1 million m^3; however, currently there is a supply constraint (European Panel Federation *Annual Report 2003*). OSB production in this subregion is primarily located in Bulgaria and Poland, with both operating close to full capacity, and with Poland exporting almost 80% of the total OSB output. Plywood production continued its confident growth pattern, given impetus by the clearly reinforced domestic demand.

TABLE 7.1.2

Wood-based panels balance in Other Europe, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* *%*
Production	11 429	12 824	12.2
Imports	3 904	4 604	17.9
Exports	4 692	4 932	5.1
Net trade	788	329	-58.3
Apparent consumption	10 641	12 495	17.4

Source: UNECE/FAO TIMBER database 2003.

7.1.4 *CIS subregion*

In the Russian Federation, apparent consumption continued climbing in 2002, as did exports (table 7.1.3). Between 1998 and 2002, the Russian Federation witnessed solid growth in production and consumption of wood-based panels (table 7.1.4). During this period, particle board production increased from 1.6 million m^3 in 1998 to 2.7 million m^3 in 2002, representing an increment of 74%. Meanwhile, domestic consumption of particle board rose by 76%. Export of particle board from Russia is relatively small. Currently, there is no OSB production in Russia.

TABLE 7.1.3

Wood-based panels balance in CIS, 2001-2002

(1,000 m^3)

	2001	*2002*	*Change 2001 to 2002* *%*
Production	5 150	5 636	9.4
Imports	503	646	28.4
Exports	1 408	1 583	12.4
Net trade	905	937	3.5
Apparent consumption	4 245	4 699	10.7

Source: UNECE/FAO TIMBER database 2003.

Fibreboard recorded 64% growth from 1998 to 2002 in terms of production, which was boosted by a 92% rise in domestic consumption. During 2002, exports of fibreboard amounted to 242,000 m^3. The production of MDF is still in the process of formation, and in the near future several MDF plants, as well as a number of OSB plants, will be constructed in the Russian Federation. During 2002, the MDF output totalled 286,000 m^3.

Also plywood production was characterized by high growth rates. During 2002, total output amounted to 1.8 million m^3, which is 64% higher than the 1998 level. The major share of plywood production is exported, and foreign sales have risen by 57% since 1998.

TABLE 7.1.4

Overview of the wood-based panels industry in Russia, 1998-2002

(1,000 m^3)

	1998	1999	2000	2001	2002	Change 2001 to 2002 %
Production of particle board	1 568	1 987	2 335	2 545	2 732	7
Export of particle board	100	95	135	155	165	6
Consumption of particle board	1 706	2 063	2 429	2 739	2 995	9
Production of MDF	88	163	215	239	286	20
Production of fibreboard	629	799	896	957	1 030	8
Export of fibreboard	173	257	279	206	242	17
Consumption of fibreboard	507	583	715	877	972	11
Production of plywood	1 102	1 324	1 484	1 590	1 808	14
Export of plywood	736	910	974	1 032	1 157	12
Consumption of plywood	395	414	548	583	682	17

Source: UNECE/FAO TIMBER database, 2003.

7.1.5 North America

Following the year 2001, when the North American composite panel producers were intensively confronted with growing capacities, declining demand, rising offshore imports (MDF and particle board) and a deteriorating domestic economy, the industry only partly recovered during 2002 (table 7.1.5). Particle board production in North America recorded another decrease of 3.7%, while consumption totalled 10.3 million m³ in 2002, which is still 24% below the 1999 record level, both in terms of volume and in terms of prices, which have continued to fall since 2000, almost reaching the depressed level of 1998. In the second quarter of 2003, particle board prices show a slight improvement (graph 7.1.4).

TABLE 7.1.5

Wood-based panels balance in North America, 2001-2002

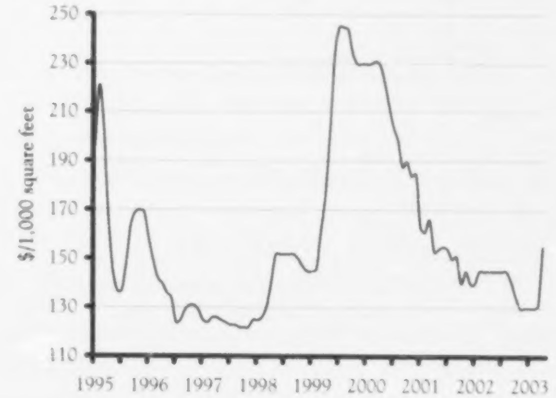
(1,000 m^3)

	2001	2002	Change 2001 to 2002 %
Production	54 981	56 198	2.2
Imports	15 729	17 509	11.3
Exports	13 792	14 119	2.4
Net trade	-1 937	-3 390	...
Apparent consumption	56 918	59 588	4.7

Source: UNECE/FAO TIMBER database 2003.

GRAPH 7.1.4

Particle board prices in the United States, 1995-2003



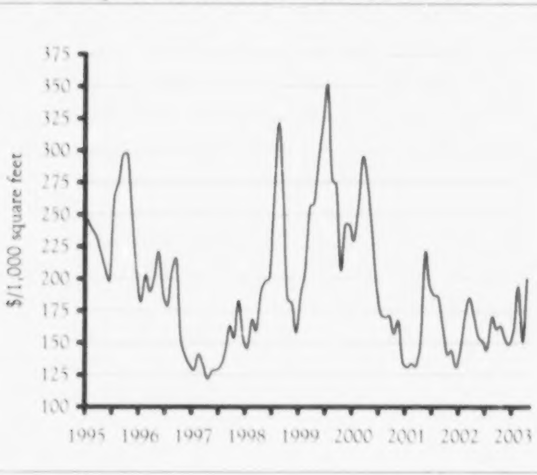
Note: Underlayment grade on a 3/8-inch basis.
Source: Random Lengths Yardstick, 2003.

The North American OSB industry is reinforcing vigorously with rapid capacity expansions. During 2002, OSB production amounted to 20.4 million m³, representing almost 90% of the world output. Since North America is also the major consumer of OSB, with demand at 20.2 million m³, most of the trade is concentrated within this region. The expected improvement in prices for 2002 did not occur and prices remain at a depressed level (graph 7.1.5). The structural panel sector continued to reduce the plywood industry capacity and restrain OSB capacity additions. It is now also facing a new development, competition from imports originating outside the region). These have rapidly expanded since 2000 (graph 7.1.6). Ireland, France and

Germany together exported some 200,000 m³ of OSB in 2002, showing sharp increases of market share, and benefiting from the weak dollar in 2002 through mid-2003. Certain softwood plywood exporters also showed the same trend in 2002. Brazil doubled its exports to some 250 000 m³ and Chile's exports were up 60% to 115,000 m³. Overall hardwood plywood imports went up by 15%. Indonesia, Malaysia, the Russian Federation, Brazil and China increased their exports significantly.

GRAPH 7.1.5

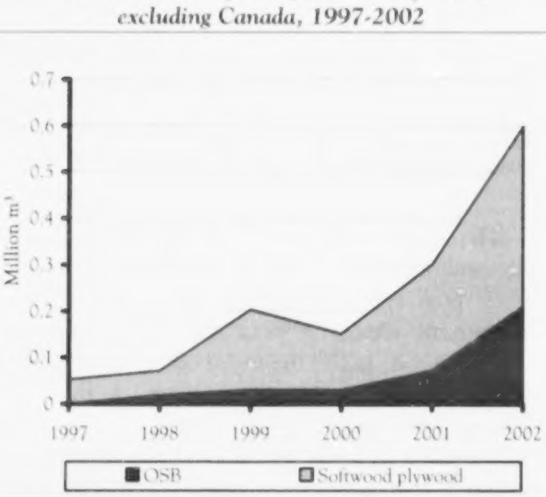
OSB prices in the United States, 1995-2003



Note: On a 7/16 inch basis.
Source: Random Lengths Yardstick, 2003.

GRAPH 7.1.6

United States imports of structural panels, excluding Canada, 1997-2002



Notes: Total United States imports of OSB were 7.5 million m³ in 2002.
Total United States imports of softwood plywood were 821,000 m³ in 2002.
Source: United States Department of Commerce, Census Bureau, *Foreign Trade Statistics*, 2003.

MDF production performed well during 2002 and set a new record at 3.6 million m³, which represents an increase of 8% compared to 2001. Production capacit expanded by some 10%. MDF consumption was up 9% to 4 million m³, leading to a significantly lowe demand/capacity ratio. Imports from Europe and Sout America make up the difference between production an consumption.

Plywood production in 2002, on the other hand showed little change from 2001, as the output amounte to 17.9 million m³, compared with levels exceeding th 20 million m³ threshold in the past. Nevertheless, th United States remains the largest producing country o plywood in the world. Consumption of plywood in Nort America totalled 20.7 million m³. Plywood, however, i facing strong competition from OSB, and continues t lose market share.

7.2 Trends in 2003 and forecasts for 2004

Since prospects for an economic recovery have bee deferred until at least 2004, the wood-based panel industry in Europe and North America will continue t face disappointing demand, leading to flat growth rates i production and an oversupply causing weak prices. O the other hand, in the CEECs and Russia, the wood based panel industry is forecast to expand firmly on th back of strong domestic demand.

The following analysis for 2003 and 2004 is based o the Timber Committee Market Discussions held i October 2003. Sources of information include countries forecasts for panel markets in 2003 and 2004, along wit updates for 2002 statistics, country market statement expert presentations, the Committee's official marke statement and information from the open discussion.

7.2.1. *EU/EFTA subregion*

Following the rapid expansion of the bio-energ industry, the western European particleboard industry wil increasingly suffer from the competition for its ra materials, as the difficult mobilisation of the availabl residues raises the costs In addition, particle boar consumption has been falling since 2000 and remain subdued during 2003, although an upturn is expected i 2004 (table 7.2.1).

Due to weak demand and supply constraints, a furthe restructuring of the particle board industry seem inevitable which will affect further production growth OSB and particularly MDF production have been, th major engines behind growth in the wood-based panel industry and are foreseen to continue their success stories Nevertheless, the stunning growth rates from recent year will decelerate, as MDF reaches full capacity, while th OSB "demand gap" will still keep operating rates below the desirable levels. Plywood is forecast to witnes sustained gradual increases, although foreign competition, especially for tropical plywood, will affect the European production.

TABLE 7.2.1

Wood-based panels balance forecast in EU/EFTA, 2003-2004

(1,000 m³)

	2003	2004	*Change 2003 to 2004* %
Production	45 657	45 996	0.7
Imports	18 150	18 228	0.4
Exports	20 876	20 985	0.5
Net trade	2 726	2 757	1.1
Apparent consumption	42 932	43 239	0.7

Source: Forecasts made at UNECE Timber Committee, October 2003.

7.2.3 *Other Europe subregion*

Benefiting from higher economic growth rates and new market opportunities in the EU after the accession of more countries, the Other Europe subregion is expected to continue to expand its share of the European panel industry. A positive net trade balance is forecast to expand in 2003 by 8.4% and again in 2004 by 5.1% (table 7.2.2). These countries expect several new plant investments in the near future, clearly indicating the positive situation for raw material supply in this subregion and demand, both inside and outside the subregion.

TABLE 7.2.2

Wood-based panels balance forecast in Other Europe, 2003-2004

(1,000 m³)

	2003	2004	*Change 2003 to 2004* %
Production	13 978	14 444	3.3
Imports	4 432	4 504	1.6
Exports	5 259	5 373	2.2
Net trade	827	869	5.1
Apparent consumption	13 151	13 575	3.2

Source: Forecasts made at UNECE Timber Committee, October 2003.

7.2.4 *CIS subregion*

The wood-based panels consumption and production in Russia are forecast to grow by over 14% on average in 2003, as particleboard and plywood demand increase dynamically (table 7.2.3). The year 2004 might face a slight deceleration in panel consumption growth; nevertheless demand is predicted to increase by another 8%. Total capacity is announced to expand by more than 1 million m³ in the next few years, confirming the optimistic opportunities for the panel industry in Russia.

TABLE 7.2.3

Wood-based panels balance forecast in Russian Federation, 2003-2004

(1,000 m³)

	2003	2004	*Change 2003 to 2004* %
Production	6 485	7 083	9.2
Imports	622	668	7.4
Exports	1 784	1 974	10.7
Net trade	1 162	1 306	12.4
Apparent consumption	5 323	5 777	8.5

Source: Forecasts made at UNECE Timber Committee, October 2003.

7.2.5 *North America*

The wood-based panels industry in North America is expected to remain depressed during 2003 and flat in 2004 (table 7.2.4). However, domestic demand is foreseen to pick up again, leading to a downturn in exports. As in western Europe, the North American panel industry is characterized by restructuring. Particle board production and consumption are forecast to fall below the 2002 levels, while plywood is predicted to obtain slight growth, despite OSB continuing to take market share, spurred by a recent upswing in OSB prices.

TABLE 7.2.4

Wood-based panels balance forecast in North American, 2003-2004

(1,000 m³)

	2003	2004	*Change 2003 to 2004* %
Production	56 763	56 910	0.3
Imports	17 259	17 385	0.7
Exports	13 960	14 103	1.0
Net trade	-3 299	-3 282	...
Apparent consumption	60 062	60 192	0.2

Source: Forecasts made at UNECE Timber Committee, October 2003.

7.3 References

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7.4 Electronic annex tables for website only

7.4.1 Wood-based panels balance in the UNECE region, 1998-2002.

7.4.2 Apparent consumption of wood-based panels in the UNECE region, 1998-2002

7.4.3 Particle board balance in the UNECE region, 1998-2002 (excluding OSB).

7.4.4 Particle board production in the UNECE region, 1998-2002 (excluding OSB).

7.4.5 Particle board trade in the UNECE region, by volume, 1998-2002 (excluding OSB).

7.4.6 Particle board trade in the UNECE region, by value, 1998-2002 (excluding OSB).

7.4.7 Particle board apparent consumption in the UNECE region, 1999-2002.

7.4.8 OSB balance in the UNECE region, 1998-2002.

7.4.9 OSB production in the UNECE region, 1998-2002.

7.4.10 OSB trade in the UNECE region, by volume, 1998-2002.

7.4.11 OSB trade in the UNECE region, by value, 1998-2002.

7.4.12 MDF balance in the UNECE region, 1998-2002.

7.4.13 MDF production in the UNECE region, 1998-2002.

7.4.14 MDF trade in the UNECE region, by volume, 1998-2002.

7.4.15 MDF trade in the UNECE region, by value, 1998-2002.

7.4.16 Fibreboard apparent consumption in the UNECE region, 1999-2002.

7.4.17 Plywood balance in the UNECE region, 1998-2002.

7.4.18 Plywood production in the UNECE region, 1998-2002.

7.4.19 Plywood trade in the UNECE region, by volume, 1998-2002.

7.4.20 Plywood trade in the UNECE region, by value, 1998-2002.

7.4.21 Plywood apparent consumption in the UNECE region, 1999-2002.

7.4.22 Major wood-based panel trade flows in the UNECE region, 1997-2001.

7.4.23 Wood-based panels balance forecast in the UNECE region, 2002-2004.

7.4.24 Veneer apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

7.4.25 Plywood apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

7.4.26 Particle board (including OSB) apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

7.4.27 Oriented strand board (OSB) apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

7.4.28 Fibreboard apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

7.4.29 Hardboard apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

7.4.30 Medium density fibreboard (MDF) apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

7.4.31 Insulating board apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

Chapter 8

Growth anticipated in 2004, but uncertainty still prevails in 2003 following an upturn in 2002 for paper, paperboard and woodpulp markets[55]

Highlights

- 2002 was a year of recovery for paper in EU/EFTA countries as production rose to near record levels after the 2001 downturn, as output and demand levels increased.
- Although an upturn was under way in 2002 and into 2003, signs of market weakness reappeared in the second quarter of 2003, with faltering momentum in prices.
- The rise of the euro in relation to the dollar and other currencies changed the relative competitive position of major producers on world markets.
- The Other Europe subregion remains a net importer of paper and paperboard, although exports have been increasing, particularly for packaging paper.
- In the Commonwealth of Independent States (CIS) subregion, Russia continued to experience stable and relatively robust growth in 2002, with pulp production up by 2.2%, and total paper and paperboard up by 7.6%.
- Along with continued growth in Russia, there was continued restructuring and realignment of the industry, by ownership and by product specialty.
- With United States industrial production still well below peak levels, North American paper and paperboard demand remains relatively weak.
- The gradual market upturn that was evident through 2002 yielded to persistent weakness and uncertainty in the first half of 2003.
- The Timber Committee anticipates that in 2003 and 2004 demand for paper and paperboard will grow slowly in Europe, remain flat in North America, and continue growing rapidly in Russia.
- Forest policies related to pulpwood supply are more of an immediate concern in Europe than in North America, where pulpwood markets show a contemporary surplus of fibre supply.
- Consumption of paper and paperboard grew strongly in Russia and steadily in the CEEC, while in EU/EFTA and North America it stagnated or declined.

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Secretariat Introduction

Authors of this chapter were Professor Eduard Akim of The Saint Petersburg State Technological University of Plant Polymers, Mr. Bernard Lombard of the Confederation of European Paper Industries, Mr. Thomas Parik of the Czech Republic and Confederation of European Paper Industries (CEPI), and Dr. Peter Ince, United States Forest Service, Forest Products Laboratory. Dr. Ince and the UNECE secretariat are solely responsible for observations and discussion of price trends in this chapter. We thank them for their contribution, with an extra thanks to Dr. Ince for coordinating the chapter's production.

8.1 Trends in 2002 and 2003

8.1.1 *EU/EFTA subregion*

After the dip in output levels experienced in 2001, 2002 saw a return almost to the record production recorded two years earlier (table 8.1.1). Paper production in EU/EFTA countries showed an increase of 2.7%, reaching 88.5 million m.t. With production capacity at 98.7 million m.t., the operating rate stayed at 90%, the same average level as in 2001.

TABLE 8.1.1

Pulp, paper and paperboard balance in EU/EFTA, 2001-2002

(1,000 m.t.)

	2001	*2002*	*Change: 2001 to 2002* *%*
Paper and paperboard			
Production	86 325	88 617	2.7
Imports	44 367	43 274	-2.5
Exports	50 969	52 604	3.2
Net trade	6 601	9 330	41.3
Apparent consumption	79 724	79 287	-0.5
Woodpulp			
Production	36 186	37 306	3.1
Imports	15 976	16 337	2.3
Exports	9 633	9 969	3.5
Net trade	-6 343	-6 367	...
Apparent consumption	42 528	43 674	2.7

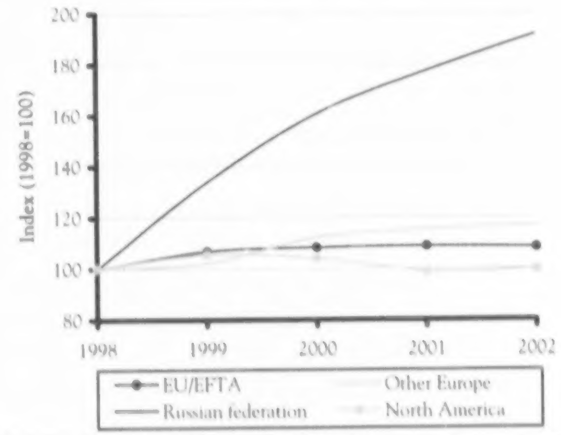
Source: UNECE/FAO TIMBER database, 2003.

Output of graphic paper grades increased overall by 1.3% in 2002. This increase was dampened by a decline of 5.7% in production of newsprint, mainly due to persistent weakness in advertising. In contrast, production of uncoated graphic paper grades rose by 3.6%, while output of coated grades increased by 3.7%. Mechanical grades (increase of 3.3%) were outperformed in 2002 by wood-free grades (increase of 4.0%).

Bucking the usual correlation to economic trends in 2001 and 2002, apparent consumption of paper and board fell slightly by 0.5%, and totalled 79.3 million m.t., even thought the EU 15 GDP increased (graph 8.1.1). At the same time, the EU 15 GDP increased by 1.0% (Eurostat – EU15). Exports outside the EU/EFTA area increased by 18.3% (graph 8.1.2). Pulp exports to non-EU/EFTA destinations increased in 2001 (graph 8.1.3).

GRAPH 8.1.1

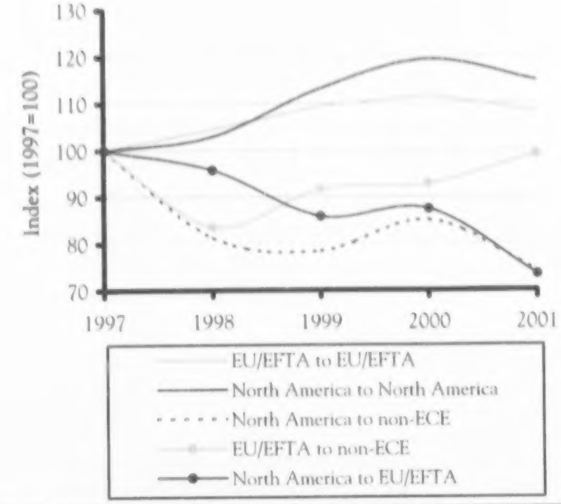
Consumption of paper and paperboard in the UNECE region, 1998-2002



Source: UNECE/FAO TIMBER database, 2003.

GRAPH 8.1.2

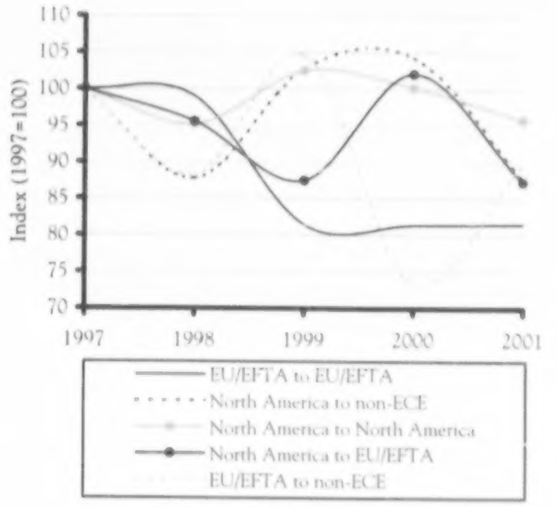
Major paper trade flows in the UNECE region, 1997-2001



Note: Full trade flow table in the electronic annex.
Source: UN COMTRADE/EFI, 2003.

GRAPH 8.1.3

Major woodpulp trade flows in the UNECE region, 1997-2001



Note: Full trade flow table in the electronic annex.
Source: UN COMTRADE/EFI, 2003.

Imports of paper and board among and into EU/EFTA countries decreased by 2.5% compared with 2001, contributing 7% to total European paper consumption in 2002. EU/EFTA countries had an overall positive trade balance in paper and board of 9.3 million m.t. in 2002.

Consumption of graphic paper grades fell by 4.1%. Production within EU/EFTA countries increased by 1.3%, but imports fell by 1.3% and exports increased by 5.9%. Consumption of newsprint decreased by 6.5% and imports rose by 2.5%. Apart from newsprint, demand for all other graphic grades increased in 2002. Overall demand for coated grades rose by 1.5%, and for uncoated grades by 3.1%.

Utilisation of recovered paper was up by 2.4% in 2002 at 42.0 million m.t. Apparent collection also increased by 3.1%, to 44.9 million m.t.

Paper production in the first quarter of 2003 showed a positive annual growth rate of 3.9%.

Woodpulp and paper markets weakened in the second quarter of 2003, with inconsistent momentum in European prices. For example, European prices for benchmark grades of bleached kraft pulp had appreciated modestly from the beginning of 2002 into early 2003, in a range from around 450/m.t. to around 500/m.t. (FOEX). However, the price in euros reached a plateau, and then fell back below the low end of the range by July as the euro strengthened and pulp producer inventories expanded in the second quarter of 2003.

Growth prospects in pulp and paper are overshadowed by weakness in manufacturing and advertising, with only modest growth in demand for paper and paperboard in packaging and case materials, and weak demand for publication papers, especially newsprint.

With only modest growth in demand, European paper prices remained relatively weak and static for key commodities such as newsprint and wood-free printing paper. The strengthening value of the euro relative to the United States dollar in the first half of 2003 also contributed to significantly lower price appreciation in euros than in dollars.

According to CEPI, the development of some EU policies which promote nature-oriented forest management, enhancement of the carbon sequestration potential of existing forests, or using more wood as a source of energy, may have a direct impact on the raw material supply in the near future, by increasing the growing stock of "untouchable" wood or by creating a competing use of wood.

8.1.2 *Other Europe subregion*

The economic and political situation in central and eastern Europe is stable and open to economic development. Low labour and energy costs (relative to western and northern Europe) also remain an advantage. Pulp and paper production and consumption have been increasing, but a significant or rapid expansion of the pulp and paper industry has yet to materialize. The focus of investors for bigger projects has already moved towards Russia, due to the availability and price of raw material.

Woodpulp production within the region in 2002 was below the production level of 2001 (down by 4.3%), but production and consumption of graphic paper and packaging paper both increased (table 8.1.2). Graphic paper production, at 2.8 million m.t. in 2002, was 4.0% higher than in 2001, while consumption increased by 0.5% to 4.3 million m.t. The region was a large net importer of graphic paper, with net imports of 1.5 million m.t. in 2002. Packaging paper production, at 4.5 million m.t. in 2002, was 3.8% higher than in 2001, while consumption increased by 4.0% to 4.8 million m.t. The region remains a net importer of packaging paper (with net imports of 0.3 million m.t. in 2002) but the region has nearly doubled its exports of packaging paper over the past five years (with exports of 2.1 million m.t. in 2002).

TABLE 8.1.2

Pulp, paper and paperboard balance in Other Europe, 2001-2002

(1,000 m.t.)

	2001	*2002*	*Change: 2001 to 2002* *%*
Paper and paperboard			
Production	8 163	8 359	2.4
Imports	5 154	5 597	8.6
Exports	3 112	3 634	16.8
Net trade	-2 042	-1 963	...
Apparent consumption	10 205	10 322	1.1
Woodpulp			
Production	3 387	3 240	-4.3
Imports	1 347	1 517	12.6
Exports	641	651	1.6
Net trade	-707	-866	...
Apparent consumption	4 093	4 106	0.3

Source: UNECE/FAO TIMBER database, 2003.

In 2002, pulp, paper and paperboard markets in central and eastern Europe were characterized by downward movement in prices, while regional production capacities were largely focused on global markets. Local consumption was still relatively low on a per capita basis. Some producers in the region were not able to reach global prices, but improvement is generally expected by 2004, together with an upturn in the global cycle. Consumption of paper within the region is increasing gradually, along with increased economic welfare, but the trend is slower than expected by more optimistic forecasts.

Much of the regional expansion in consumption of paper and paperboard in recent years has been met by imports, including increased imports from Russia and northern Europe. Central and eastern Europe are still showing increasing GDP, generally better than in other parts of Europe. Investors are therefore largely focusing on this region, though not so significantly in the pulp and paper sector. Most investments have been made to update capacities already existing in the region. Big players in the market own the main production facilities and they are becoming more and more competitive in all aspects. In the long run, relatively low consumption of paper in this region promises a potential of upward development with growing social and economic welfare.

Investments are focused on updating technology in order to reach higher standards in quality of products as well as environmental protection. In some countries this process is already well advanced and production facilities are fully competitive in all aspects, including sourcing of raw material from certified forests. However, prices of wood raw material are generally decreasing or stagnating, as the level of recycled paper utilization is increasing. A necessary focus on export markets is also expected in the mid-term future.

8.1.3 CIS subregion

In 2002–2003, there was definite growth in both consumption of pulp and paper products and their output (table 8.1.3). Owing to political and economic stability in the country, Russia's pulp and paper sector continued to expand output of pulp, paper and board. During 2002, total production of pulp (both integrated pulp and market pulp) increased by 5.6%, output of market pulp alone increased by 3.2%, and output of paper and board increased by 5.8%, with paperboard output increasing by 9.8% (table 8.1.4, graphs 8.1.4 and 8.1.5).

TABLE 8.1.3

Pulp, paper and paperboard balance in the Russian Federation 2001-2002

(1,000 m.t.)

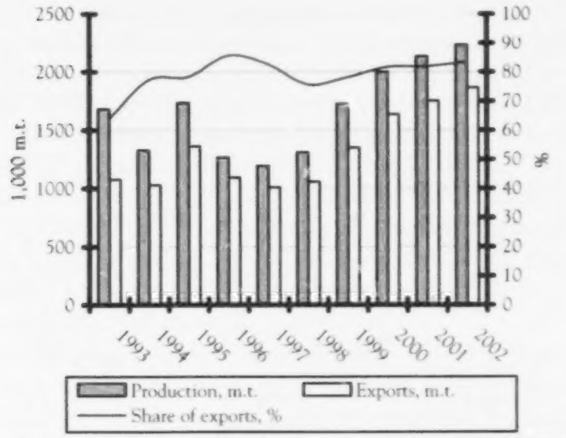
	2001	*2002*	*Change: 2001 to 2002* *%*
Paper and paperboard			
Production	5 625	5 915	5.2
Imports	495	602	21.6
Exports	2 347	2 441	4.0
Net trade	1 852	1 839	-0.7
Apparent consumption	3 773	4 076	8.0
Woodpulp			
Production	6 152	6 414	4.3
Imports	33	47	42.4
Exports	1 785	1 870	4.8
Net trade	1 752	1 823	4.1
Apparent consumption	4 400	4 591	4.3

Source: UNECE/FAO TIMBER database, 2003.

There was, however, a simultaneous increase in the negative trade balance for paper and board products in monetary terms (graph 8.1.6 and table 8.1.4). The excess value of paper and board imports over exports for these products is mainly due to the fact that Russia is importing relatively expensive products, such as high quality container and packaging materials, clay-coated paper, and sanitary tissue, while exporting comparatively less expensive products, such as newsprint and kraft liner.

GRAPH 8.1.4

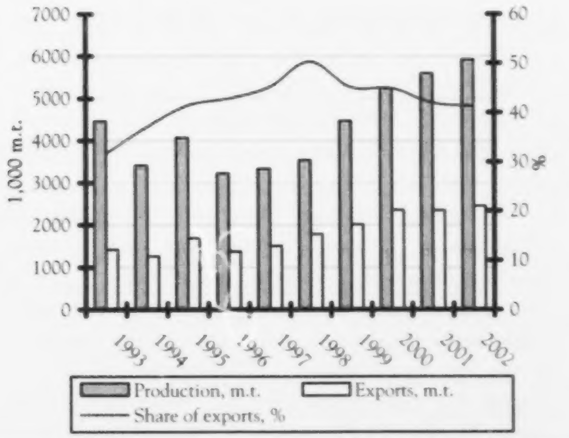
Exports of market pulp in Russia, 1993-2002



Sources: Goscomstat of the Russian Federation, *PPB Exports* and the authors' data interpretation, 2003.

GRAPH 8.1.5

Exports of paper and paper board in Russia, 1993-2002



Sources: Goscomstat of the Russian Federation, *PPB Exports* and the authors' data interpretation, 2003.

A definite restructuring is continuing in the Russian pulp and paper industry. A number of mills (such as OAO Svetogorsk, and the Syktyvkar Forestry Complex) have achieved notable success in office paper production. Some changes also took place in the in the ownership structures. For example, the Syktyvkar Forestry Complex was acquired by the Neusiedler Company, while the Ust–Ilimsk Forestry Complex was acquired by the Ilim Pulp Enterprise. Having begun in late 2001, the processes of repartition of plant properties were also in progress in 2002. These processes led to disputes at the Kotlas Mill, the Bratsk Mill and the Vyborg Mill.

TABLE 8.1.4

Russian paper and board exports and imports in 2000-2002

(million $)

	Exports	*Imports*	*Total trade balance*
2000	920	731	+189
2001	927	1 012	-85
2002	887	1 200	-313

Sources: State Customs Committee, *PPB Magazine, PPB Exports, PPB Imports* and the author's data interpretation.

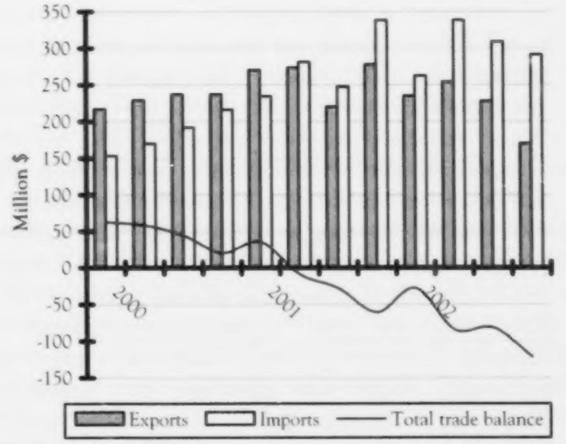
Issues concerning development of the Forest Industrial Complex were also discussed in 2002, at the very highest official level, namely, at an enlarged session of the State Council and at a government meeting, where a growth concept for the Forest Industrial Complex for a period up to 2015 was considered.

In late 2001 and early 2002, the Confederation of Forest Industrial Enterprises of Russia's North–West was established. In December of 2002, the RAO Bumprom Association was reorganized. In late 2002, new environmental laws based on comparison between environmental performance of a mill and best acceptable technology (BAT) parameters were accepted.

In general terms, the economic and market trends along with political and industrial development initiatives, point to a future with expanded output and expanded use of forest resources in the pulp and paper sector of Russia.

GRAPH 8.1.6

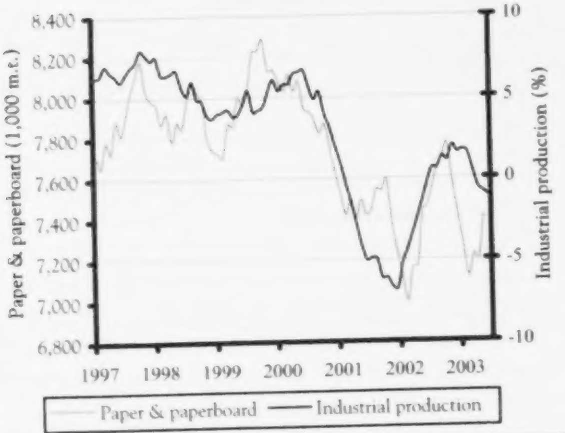
Russia's paper and paperboard exports and imports, 2000-2002



Sources: State Customs Committee, *PPB Magazine, PPB Exports, PPB Imports* and the authors' data interpretation, 2003.

GRAPH 8.1.7

United States paper and paperboard production and growth in industrial production, 1997-2003



Note: Paper and paperboard production in m.t., 3-month average. **Sources:** American Forest & Paper Association and U.S. Federal Reserve, 2003.

TABLE 8.1.5

Pulp, paper and paperboard balance in North America 2001-2002

(1,000 m.t.)

	2001	*2002*	*Change: 2001 to 2002* %
Paper and paperboard			
Production	101 272	102 018	0.7
Imports	19 160	18 792	-1.9
Exports	22 701	22 501	-0.9
Net trade	3 541	3 710	4.8
Apparent consumption	97 731	98 308	0.6
Woodpulp			
Production	78 790	79 313	0.7
Imports	6 929	6 841	-1.3
Exports	16 896	17 478	3.4
Net trade	9 967	10 637	6.7
Apparent consumption	68 823	68 675	-0.2

Source: UNECE/FAO TIMBER database, 2003.

8.1.4 North America

A key determinant of North American paper and paperboard demand is United States industrial production, which has yet to recover fully and remains below its historical peak of the year 2000 (graph 8.1.7 and table 8.1.5). Both United States and Canadian paper and paperboard output were experiencing an upturn in 2002, along with United States industrial production, but a secondary dip in industrial production during the first half of 2003 translated into another slowdown in paper and paperboard production.

A general expectation is that United States pulp, paper and paperboard production, along with overall United States industrial production, will benefit from the stimuli of exceptionally low interest rates, reduced federal income taxes, and a weaker trade-weighted dollar value. But at the end of the first half of 2003, the overall United States industrial capacity utilisation rate remained exceptionally low (under 75%) and United States paper and paperboard production in the first five months of 2003 was still running well below the historical peak production level of 1999. As with the euro, the Canadian dollar appreciated against the United States dollar in 2003, offsetting some competitive advantages of Canadian producers, but Canadian pulp, paper and paperboard output was expanding more rapidly in percentage terms than United States output early in 2003.

According to the Pulp and Paper Products Council of Canada, reporting data through April of 2003, Canadian production of paper and paperboard was up by 4% compared with the same period in 2002. Canadian production of woodpulp was also up by 4% through the first four months of 2003 relative to the same period in 2002.

According to the American Forest & Paper Association, United States paper and paperboard production was 81.3 million m.t. in 2002, up by 0.8% over 2001. United States production of paper and paperboard in the first five months of 2003 was, however, down by approximately 0.7% relative to production during the same period of 2002. Paper production was down by about 2.5%, while paperboard production was up by 0.9%. Thus, total United States paper and paperboard output was still running in 2002 and 2003 at an annual rate roughly 8% below the historic peak of 1999. United States production of woodpulp was up by 1.1% in the first five months of 2003 relative to the same period in 2002, but on an annual basis United States woodpulp output was running at a level in early 2003 that was still about 13% below the peak production level of the year 1995.

Although orders and prices for pulp, paper and paperboard were firming up late in 2002 and early in 2003, prices generally appeared to reach a plateau by the end of the first half of 2003. With United States pulp, paper and paperboard output still running at levels well below peak production levels of the mid to late 1990s, with only modest upward momentum in demand, and with the overall North American economy, prices for most pulp and paper commodities remained in real [illegible] near the lower end of their historical range. Closu[illegible] mills, downtime and reductions of capacity, particularly in the United States in recent years, offset some of the downward pressures on prices, but North American prices for most paper and paperboard commodities exhibited little upward momentum. North American market pulp prices, denominated in United States dollars, did, however, increase by about 15% from late 2002 into 2003, partly under the influence of a stronger euro and stronger Canadian dollar. As in Europe, however, pulp prices reached a plateau and appeared to be weakening towards the end of the first half of 2003.

Although an upturn is widely anticipated in 2003 and 2004, United States woodpulp production has declined since the mid-1990s as pulpwood supply has expanded, and these trends contributed to depressed prices for pulpwood in many areas. In the southeastern United States, for example, an estimated 13 million hectares have been planted (or replanted) in productive pine plantations since the mid-1980s, significantly increasing yield of pine pulpwood in recent years, during the period when United States woodpulp production declined.

Paper recycling has also increased since the 1980s, and United States net imports of pulp, paper and paperboard products rose from less than 1 million m.t. in 1996 to around 8 million m.t. in 2002. Real prices for southern pine pulpwood stumpage have reportedly fallen by more than one third since peaking in 1997 (*Timber Mart-South*).

Partly as a consequence of these trends, the annual appreciation in timberland value has also fallen significantly since the early 1990s (NCREIF Index), and many pulp and paper corporations have sold or divested large areas of forestland in recent years. There also appears to be less emphasis in North America than in Europe on new policies promoting nature-oriented forest management, enhancing the carbon sequestration potential of existing forests, and using more wood as a source of energy. In effect, lacklustre demand for pulpwood is achieving some of the same results, e.g. reduced timber harvest and more carbon sequestration, without policy intervention (and use of wood as a source of energy in the United States has been declining since the 1980s).

8.1.5 *Summary*

An upturn in pulp, paper and paperboard markets was under way in 2002, but signs of market weakness reappeared in the first half of 2003, with only modest or localized growth in shipments and faltering momentum in prices. Among UNECE subregions, the most significant growth in 2002 was experienced in the CIS, and in Russia in particular, followed by EU/EFTA and Other Europe.

In the EU/EFTA region, paper and paperboard production and consumption increased in 2002, and reached close to record historical levels. However, the rising value of the euro in 2003 relative to the dollar contributed to less price appreciation in euros for pulp and paper commodities than in dollars.

In the Other Europe (central and eastern) subregion, paper and paperboard output and consumption increased, along with increased paper recycling, although woodpulp production declined in 2002. The Other Europe subregion remains a net importer of paper and paperboard, although exports have been increasing, particularly for packaging paper.

In the CIS subregion, Russia continued to experience stable and relatively robust growth in 2002, with pulp production up by 4.2%, and total paper and paperboard up by 5.2%. Along with continued growth in Russia, there is continued restructuring and realignment of the industry, by ownership and by product specialty.

With United States industrial production still well below peak levels, North American paper and paperboard demand remains relatively soft. Although industrial output and shipments of paper and paperboard were gaining through 2002 after having declined in 2001, both were experiencing secondary declines in the first half of 2003 (graph 8.1.7). Thus, the gradual market upturn that was evident through 2002 yielded to persistent weakness and uncertainty in the first half of 2003.

The market trends observed for Europe and the CIS subregion diverge in character and in forest policy implications from those observed in North America (particularly the United States). Production and consumption remain near record levels in Europe and are clearly on the rise in Russia. This leads to some concern in Europe that policies which promote nature-oriented forest management, carbon sequestration or use of wood for energy may have a direct negative impact on pulpwood raw material supply in the near future, by increasing the growing stock of "untouchable" wood or by creating a competing use of wood. By contrast, the recent downturn in woodpulp production in the United States (down by about 13% since the mid-1990s), increasing net imports of pulp, paper and paperboard, and the expansion of pine plantations in the southeastern United States, have contributed to a temporary surplus in supply of pulpwood, to depressed pulpwood prices, and to corporate divestitures of timberland holdings. Thus, divergent market trends contribute to somewhat divergent forest policy concerns among UNECE regions.

8.2 Trends in 2003 and forecasts for 2004

The preceding sections of this chapter were written in July of 2003 prior to the October session of the UNECE Timber Committee. The following analysis for 2003 and 2004 is based on the Timber Committee Market Discussions held in October 2003. Sources of information include countries' forecasts for paper, paperboard and pulp markets in 2003 and 2004, along with updates for 2002 statistics, country market statements, expert presentations, the Committee's official market statement and information from the open discussion. It should also be noted that the countries' forecasts do not reflect a uniform methodology.

8.2.1 EU/EFTA *subregion*

Modest growth in 2003 and 2004 forecast by the Timber Committee for woodpulp, paper and paperboard consumption and production in the EU/EFTA subregion (table 8.2.1). Apparent consumption of paper and paperboard was projected to increase by 2.0% in 2003 and by 1.0% in 2004.

TABLE 8.2.1

Pulp, paper and paperboard balance forecast in EU/EFTA subregion, 2003-2004

(1,000 m.t.)

	2003	*2004*	*Change 2003 to 2004* %
Paper and paperboard			
Production	90 066	91 170	1.2
Imports	45 460	46 370	2.0
Exports	53 475	54 635	2.2
Net trade	8 015	8 265	3.1
Apparent consumption	82 051	82 906	1.0
Woodpulp			
Production	37 656	38 211	1.5
Imports	16 042	16 240	1.2
Exports	10 627	10 844	2.0
Net trade	-5 415	-5 396	…
Apparent consumption	43 071	43 607	1.2

Source: Forecasts made at UNECE Timber Committee, October 2003.

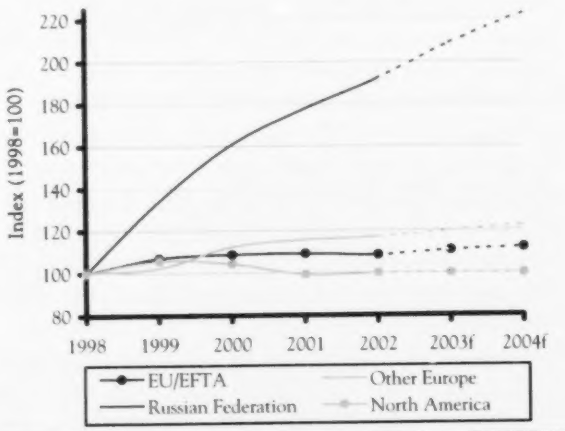
Paper and paperboard production was projected to increase by 1.9% in 2003 and by 1.2% in 2004. Paper and paperboard imports were projected to increase by 2.3% in 2003 and by 2.0% in 2004. Paper and paperboard exports were projected to increase by 2.1% in 2003 and by 2.2% in 2004.

Woodpulp production was projected to increase by 1.5% in both 2003 and 2004, while woodpulp exports were projected to increase by 3.9% in 2003 and 2.0% in 2004, and woodpulp imports were projected to decline by 0.9% in 2003 but increase by 1.2% in 2004. Apparent consumption of woodpulp was projected to show no change (0%) in 2003 and 1.2% growth in 2004. In Europe, woodpulp now accounts for less than half of the raw material used for paper production as the use of recovered paper expands rapidly[56].

The tonnage of paper and paperboard consumption is forecast to remain rather constant in 2003 and 2004. Likewise the index of paper and paperboard consumption is projected to remain relatively flat in 2003 and 2004 in the EU/EFTA subregion, even though a broader economic recovery was generally anticipated (graph 8.2.1).

GRAPH 8.2.1

Consumption of paper and paperboard in the UNECE region, 1998-2004



Note: f = Timber Committee's forecast trends for 2003 and 2004, made at the October 2003 session, were applied to the 2002 figure.

Sources: UNECE/FAO TIMBER database, 2003, and Timber Committee forecasts, 2003.

8.2.2 *Other Europe subregion*

After declining in 2003 a distinct recovery in woodpulp production and consumption was projected in 2004, along with growth in paper and paperboard consumption and production in the Other Europe subregion (table 8.2.2). Apparent consumption of paper and paperboard was projected to increase by 2.3% in 2003 and by the same amount in 2004.

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[56] Recovery of forest products markets in the UNECE region in 2003 amid concerns for overcapacity in short term", UNECE Note for the Press ECE/TIM/03/N02, 14 October 2003. www.unece.org/trade/timber/press.htm

TABLE 8.2.2

Pulp, paper and paperboard balance forecast in Other Europe subregion, 2003-2004

(1,000 m.t.)

	2003	*2004*	*Change 2003 to 2004* %
Paper and paperboard			
Production	8 370	8 584	2.6
Imports	5 352	5 450	1.8
Exports	3 754	3 835	2.2
Net trade	-1 598	-1 615	...
Apparent consumption	9 968	10 199	2.3
Woodpulp			
Production	3 112	3 261	4.8
Imports	1 450	1 461	0.8
Exports	633	659	4.1
Net trade	-817	-802	...
Apparent consumption	3 929	4 063	3.4

Source: Forecasts made at UNECE Timber Committee, October 2003.

Paper and paperboard production was projected to increase by 0.9% in 2003 and by 2.6% in 2004. Paper and paperboard imports were projected to increase by 4.0% in 2003 and by 1.8% in 2004. Paper and paperboard exports were projected to increase by 1.6% in 2003 and by 2.2% in 2004.

Woodpulp production was projected to decrease by 4.4% in 2003 but increase by 4.8% in 2004, while woodpulp exports were projected to decrease by 3.2% in 2003 but increase by 4.1% in 2004, and woodpulp imports were projected to increase by 5.1% in 2003 but increase by only 0.8% in 2004. Apparent consumption of woodpulp was projected to show a decline of 1.3% in 2003 but an increase of 3.4% in 2004.

Paper and paperboard consumption was projected to remain relatively flat in tonnage in the Other Europe subregion, although the index of paper and paperboard consumption (1998=100) was projected to increase modestly and to remain above the indexes for western Europe and North America in 2003 and 2004.

8.2.3 CIS subregion

Continued robust growth was projected in 2003 and 2004 for woodpulp, paper and paperboard consumption and production in the CIS subregion, as illustrated by projected trends for the Russian Federation (table 8.2.3). Apparent consumption of paper and paperboard in the Russian Federation was projected to increase substantially, by 8.7% in 2003 and by 6.8% in 2004. Russian consumption will grow faster than in Europe, as per capita consumption levels converge on those of Europe and North America[57].

Paper and paperboard production was also projected to increase substantially, by 7.5% in 2003 and by 7.0% in 2004. Paper and paperboard imports were projected to increase by only 0.6% in 2003 and by 1.4% in 2004. Paper and paperboard exports were projected to increase by 3.6% in 2003 and by 5.9% in 2004.

Woodpulp production was projected to increase by 2.2% in 2003 and by 2.1% in 2004, while woodpulp exports were projected to increase by 3.4% in 2003 and 2.6% in 2004. Apparent consumption of woodpulp was projected to grow by 1.5% in 2003 and by 1.8% in 2004.

Although the tonnage of paper and paperboard consumption in the Russian Federation remains relatively low by comparison to Europe and North America, the index of paper and paperboard consumption (1998=100) was projected to continue increasing substantially in 2003 and 2004. The index is forecast to more than double in the period from 1998 to 2004, the period following Russia's currency devaluation.

TABLE 8.2.3

Pulp, paper and paperboard balance forecast in CIS subregion, 2003-2004

(1,000 m.t.)

	2003	*2004*	*Change 2003 to 2004* %
Paper and paperboard			
Production	6 430	6 880	7.0
Imports	690	700	1.4
Exports	2 550	2 700	5.9
Net trade	1 860	2 000	7.5
Apparent consumption	4 570	4 880	6.8
Woodpulp			
Production	6 651	6 790	2.1
Imports	40	35	-12.5
Exports	1 950	2 000	2.6
Net trade	1 910	1 965	2.9
Apparent consumption	4 741	4 825	1.8

Source: Forecasts made at UNECE Timber Committee, October 2003.

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[57] Ibid.

8.2.4 North America

Little growth was projected in 2003 and 2004 for woodpulp, paper and paperboard consumption and production in North America, although exports were projected to increase modestly (table 8.2.4). Apparent consumption of paper and paperboard in North America was projected to increase by just 0.1% in 2003 but decline by 0.1% in 2004, largely reflecting uncertainty about recovery in industrial production and demands for packaging and print advertising media. A more robust recovery in those end use sectors could stimulate a more robust upturn in paper and paperboard demand.

TABLE 8.2.4

Pulp, paper and paperboard balance forecast in North America, 2003-2004

(1,000 m.t.)

	2003	*2004*	*Change 2003 to 2004* *%*
Paper and paperboard			
Production	102 101	102 210	0.1
Imports	19 001	19 217	1.1
Exports	22 710	23 157	2.0
Net trade	3 709	3 940	6.2
Apparent consumption	98 392	98 270	-0.1
Woodpulp			
Production	79 460	79 480	0.0
Imports	6 801	6 780	-0.3
Exports	18 080	18 207	0.7
Net trade	11 279	11 427	1.3
Apparent consumption	68 181	68 053	-0.2

Source: Forecasts made at UNECE Timber Committee, October 2003.

Paper and paperboard production was likewise projected to increase very modestly, by only 0.1% per year in 2003 and 2004. Paper and paperboard imports were projected to increase by 1.1% in both 2003 and 2004. Paper and paperboard exports were projected to increase by 0.9% in 2003 and by 2.0% in 2004.

Woodpulp production was projected to increase by just 0.2% in 2003 and was not projected to change 2004, while woodpulp exports were projected to increase by 3.4% in 2003 and by 0.7% in 2004, and woodpulp imports were projected to decline slightly by 0.6% in 2003 and by 0.3% in 2004. Apparent consumption of woodpulp was projected to drop by 0.7% in 2003 and by 0.2% in 2004.

The tonnage of paper and paperboard consumption in North America remains higher than that of Europe, but consumption has declined as a result of structural changes in end use markets, including a decoupling between GDP growth and industrial output, along with weakness in demands for packaging and print advertising media. The North American index of paper and paperboard consumption (1998=100) was projected to remain relatively flat and lower than that of Europe in 2003 and 2004.

8.3 References

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8.4 Electronic annex tables for website only

8.4.1 Paper and paperboard balance in the UNECE region, 1998-2002.
8.4.2 Paper and paperboard apparent consumption in the UNECE region, 1999-2002.
8.4.3 Graphic paper balance in the UNECE region, 1998-2002.
8.4.4 Production of graphic paper in the UNECE region, 1998-2002.
8.4.5 Graphic paper trade in the UNECE region, by volume, 1998-2002.
8.4.6 Graphic paper trade in the UNECE region, by value, 1998-2002.
8.4.7 Graphic papers apparent consumption in the UNECE region, 1999-2002.
8.4.8 Packing paper balance in the UNECE region, 1998-2002.
8.4.9 Production of packaging paper in the UNECE region, 1998-2002.
8.4.10 Packaging paper trade in the UNECE region, by volume, 1998-2002.

8.4.11 Packaging paper trade in the UNECE region, by value, 1998-2002.
8.4.12 Packaging materials apparent consumption in the UNECE region, 1999-2002.
8.4.13 Major paper trade flows in the UNECE region, 1997-2002.
8.4.14 Mechanical woodpulp balance in the UNECE region, 1998-2002.
8.4.15 Production of mechanical woodpulp in the UNECE region, 1998-2002.
8.4.16 Mechanical woodpulp trade in the UNECE region, by volume, 1998-2002.
8.4.17 Mechanical woodpulp trade in the UNECE region, by value, 1998-2002.
8.4.18 Chemical woodpulp balance in UNECE region, 1998-2002.
8.4.19 Production of chemical woodpulp in the UNECE region, 1998-2002.
8.4.20 Chemical woodpulp trade in the UNECE region, by volume, 1998-2002.
8.4.21 Chemical woodpulp trade in the UNECE region, by value, 1998-2002.
8.4.22 Chemical woodpulp apparent consumption in the UNECE region, 1999-2002.
8.4.23 Sanitary and household papers apparent consumption in the UNECE region, 1999-2002.
8.4.24 Other paper and paperboard apparent consumption in the UNECE region, 1999-2002.
8.4.25 Major woodpulp trade flows in the UNECE region, 1997-2001.
8.4.26 Woodpulp balance forecast in the UNECE region, 2002-2004.
8.4.27 Paper and paperboard balance forecast in the UNECE region, 2002-2004.
8.4.28 Woodpulp apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.
8.4.29 Paper and paperboard apparent consumption, production, imports and exports forecast in the UNECE region, 2002-2004.

Chapter 9

Markets for certified forest products, 2002-2003[58]

Highlights

- The area of certified forests in the world has further grown over the last year, reaching about 150 million hectares by mid-2003, mainly driven by the Pan European Forest Certification (PEFC) system and the Sustainable Forestry Initiative in the United States.
- The potential supply of certified forest products (CFPs) has grown in parallel with the area certified, and is estimated at almost 300 million m³ annually worldwide, close to the annual industrial roundwood consumption of Europe (excluding the Russian Federation).
- Still, only a fraction of the wood supplied from certified forests is actually traded as (labelled) CFPs, reflecting the difficulty of finding viable markets and stable supply through the chain-of-custody.
- Today, about 3140 chain-of-custody certificates exist worldwide, which is an increase of almost 20% from last year; two thirds of these are held by companies in Europe, and 80% by the Forest Stewardship Council (FSC).
- Business-to-business markets for CFPs continue to be mainly located in Germany, the United Kingdom and the United States.
- Markets for CFPs are now often supply-driven; however, no official data is available.
- FSC-certified CFPs are available across a large range of forest products; PEFC-certified CFPs are increasingly taken up by the roundwood trade and the sawmilling industry, especially in Germany, Austria and Finland.
- Consumer awareness of CFPs continues to be low, even in the more advanced markets in western Europe; however, growing familiarity with the FSC logo is claimed in the United Kingdom, and PEFC is stepping up its communications campaigns.
- Public procurement is an important driver of demand in several key importing countries, including Germany and the United Kingdom, and is expected to become more visibly so for tropical wood.
- The illegal logging issue has dominated public discussion in 2002 to 2003, from which it emerged that legality of the wood traded is not to be confused with the quality of management.

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Secretariat introduction

Certified forest products markets received attention in international discussions in 2002 and 2003, in part as a result of government attention to forest law enforcement and governance issues. In the forest products trade, some manufacturers and traders were asked to prove the legality of the sources of their timber, with some resorting to certification as an answer, and others having to prove legality even though adequate systems are not fully created.

Nevertheless, the markets for certified forest products continue to spark emotion in the forest and forest industries sector, especially by retailers attempting to assure customers of the renewability and sustainability of wood production.

The UNECE Timber Committee has a mandate to follow the markets for certified forest products, and the FAO European Forestry Commission follows developments in certification of sustainable forest management. This chapter focuses on the market aspect. At its annual market discussions, the Timber Committee addresses issues related to certified forest products. The Committee has called certification a communications tool to bring the message about the region's sustainable forest management from producers to consumers.

The basis for the information in this chapter is not the UNECE and FAO TIMBER database, which is based upon country-supplied statistics, as in the previous chapters. Unfortunately, no official statistics exist on certified forest products because they are not currently recognized in customs classification codes. Instead, the analysis in this chapter has, for its foundation, interviews of key producers, retailers of certified forest products, Global Forest and Trade Networks and auditing bodies and certification systems, as well as some information from the officially nominated country correspondents on certified forest products and certification of sustainable forest management. The secretariat thanks all those who responded to the authors' surveys. The UNECE Timber Committee and the FAO European Forestry Commission established this informal network of correspondents in 2001 to provide a neutral source of information. Unless otherwise attributed, all estimates and opinions in this chapter are from the authors' interpretations and analysis of the results of their surveys.

We sincerely appreciate the ongoing cooperation with Dr. Ewald Rametsteiner, Expert on Certified Forest Products Markets, from the Institute of Forest Sector Policy and Economics, Vienna, Austria, along with his assistant, Mr. Florian Kraxner. Their up-to-date and informative analysis of the markets for certified forest products provide valuable insight into this market segment. Dr. Rametsteiner also wrote *Sustainable Forest Management Certification*, which was published by the Liaison Unit, Vienna, of the Ministerial Conference on the Protection of Forests in Europe, where he also serves as an expert.

The UNECE Timber Committee and the FAO European Forestry Commission have followed developments in certification of sustainable forest management more closely in a series of annual UNECE/FAO *Geneva Timber and Forest Discussion Papers*[59].

9.1 Introduction

Certified forest product (CFP) markets have been analysed in a regular chapter in the *Forest Products Annual Market Review* since 1998. The discussion in this *Forest Products Annual Market Analysis* concentrates on the market and trade aspects for CFPs. Non-independently certified forests or CFPs, and process certification schemes such as ISO 14001, are not included, as these do not generally lead to certified forest products.

9.2 What are CFPs?

Certified forest products bear labels demonstrating in a verifiable manner by independent bodies that they come from forests that meet standards for sustainable forest management. Consumers might find labels on furniture and wood products, while manufacturers can verify the source of certified products from a system of chain-of-custody that identifies the origin of the wood.

9.3 Supply of CFPs

9.3.1 *Forest area certified*

As of mid-2003, the total area of forests certified[60] worldwide is about 150 million hectares, or about 4% of the world's forests. The last years have seen an exponential increase of forest area certified by the Forest Stewardship Council (FSC), the Pan European Certification System (PEFC) in Europe, the Sustainable Forestry Initiative (SFI) in North America, the Canadian Standards Association (CSA) system, as well as the American Tree Farm System (ATFS) in the United States. Today, these five certification systems dominate forest certification. The Dutch Keurhout verification system has approved a further 1.2 million hectares of forests independently certified in Gabon.

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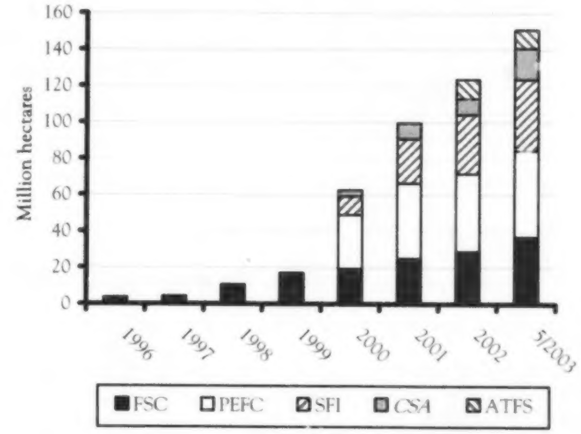
[59] www.unece.org/trade/timber/mis/cfp.htm

[60] Certification is understood here in the strict sense, requiring third-party audit. ISO 14001- type process certification systems, which usually do not lead to certified products in the market, are not included.

The increase of the area of forests certified (graph 9.3.1) has continued its pace of strong growth over the last years, with similar growth rates for all major schemes. The area of forests certified under the SFI has, however, somewhat decreased over the last year. In terms of total forestland certified, PEFC now dominates with 32%, followed by SFI (26%) and FSC (24%). Please note that the graph contains overlaps owing to double certification, e.g. in North America (0.5 million hectares SFI and FSC), and small areas in Europe between PEFC and FSC.

GRAPH 9.3.1

Area of certified forest, 1996-2003



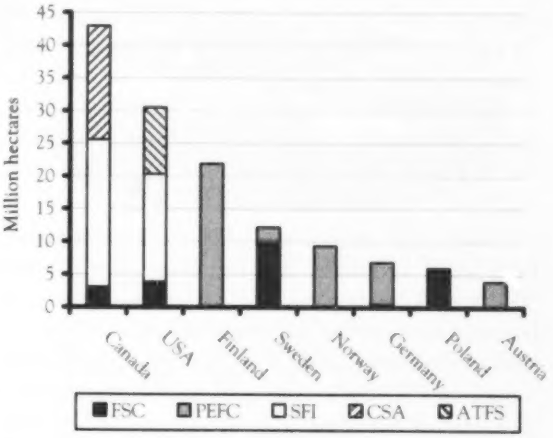
Notes: FSC = Forest Stewardship Council, PEFC = Pan European Certification System, SFI = Sustainable Forestry Initiative, CSA = Canadian Standards Association system, ATFS = American Tree Farm System. Area in 2003 is through May.
Sources: Individual certification systems, and for ATFS, country correspondent, 2003.

Geographically, more than 90% of the total area certified is still in the northern hemisphere, with about half of the certified forest area located in Europe and around 40% in North America. Developing countries account for only around 10% of the total forest area certified. The largest areas are in Brazil (1.28 million hectares FSC certified, 50% of which are plantations), Gabon (1.2 million hectares Keurhout approved), South Africa (0.9 million hectares FSC certified, 100% plantations) and Bolivia (0.8 million hectares, FSC). This imbalance between developed and developing countries has changed rapidly. In 1996 the share of the total in developing countries was approximately 70%. The majority of certified forest area is industrial forests, especially in the FSC system and the SFI programme.

In Europe around 40% of the existing forest area[61] is already certified, compared with around 18% of the forest area in the United States and in Canada and less than 0.5% in Russia. Canada and the United States are leaders in terms of certified forest area (graph 9.3.2).

GRAPH 9.3.2

Top 8 countries' certified forest area, mid 2003



Notes: FSC = Forest Stewardship Council, PEFC = Pan European Certification System, SFI = Sustainable Forestry Initiative, CSA = Canadian Standards Association system, ATFS = American Tree Farm System.
Sources: Individual certification systems, and for ATFS, country correspondent, 2003.

9.3.2 Potential and Actual Supply of CFPs

In 2003, the potential timber supply from the world's certified forests is large, estimated at close to 300 million m^3 on an annual basis. The roundwood supply of several large producing countries in Europe is up to 100% from certified forests, for example in Finland and Austria. The majority of CFPs are temperate softwood, where supply from some countries exceeds actual demand from the manufacturing and trade sectors. Tropical wood CFPs are currently available only from a limited number of countries, in comparatively small quantities, and often from lesser-traded species. Anecdotal information suggests that tropical wood and some temperate semi-finished CFPs also suffer from unstable supply.

Only a small fraction of the potential annual supply of wood from certified forests is actually traded as CFPs, and a large majority is marketed without reference to certification status from some point in the processing chain. This is due to several factors, including low interest in some manufacturing sectors and the "own-label" policies of some major retailers, e.g. in the United States and Europe. In the absence of official trade figures, the actual volume or share of CFPs is difficult to estimate.

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[61] The reference area is based on *Temperate and Boreal Forest Resources Assessment 2000* data for forest area, excluding other wooded land (forest area in Europe excludes CIS countries).

9.4 Demand for CFPs

9.4.1 *Business-to-business markets*

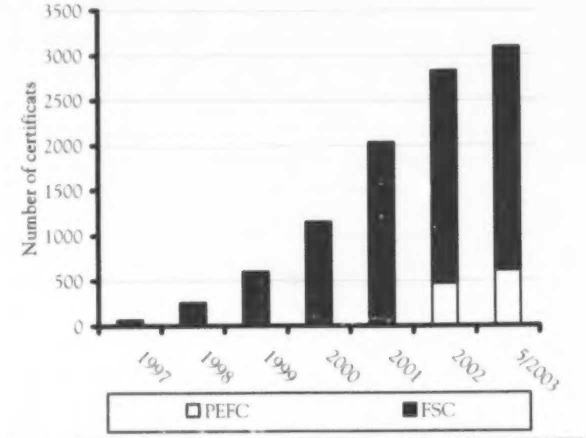
CFPs are available in many countries in the UNECE region. As indicated, no tracing of CFPs through official figures is possible. However, the number and types of chain-of-custody (CoC) certificate[62] holders is one indication of the amount and characteristics of demand for CFPs in business-to-business markets. Note that only the number of CoC certificates is known, not the size of the respective companies.

Today, still only about 3,140 CoC certificates have been issued worldwide, of which about 2,480, or roughly 80%, are FSC and 661 are PEFC. Over the last year, PEFC managed to more than quadruple its CoC certificates, with marked increases especially in Germany and Austria. The number of FSC CoC certificates, on the other hand, grew at a rate of less than 10% (graph 9.4.1). As the SFI certification scheme has not yet started to issue CoC certificates, much of the wood from forests certified according to SFI standards is thus technically unable to move downstream as CFPs. Despite the high importance placed by the international business community on mutual recognition between certification systems to alleviate the bottleneck created for CFP markets through the lack of CoCs, no major breakthrough has been reached so far between the proponents of different certification schemes.

In relation to geographical distribution of business-to-business demand for CFPs according to the number of CoC holders in total, Germany leads the table, with comparatively few FSC and a rapidly growing number of PEFC CoC certificates, followed by the United States (graphs 9.4.2 and 9.4.3). Still, only as few as around 400 companies in total are entitled to process or sell CFF , which is a very small fraction of businesses involved in wood processing and trade in these countries as a whole. The United Kingdom, Austria and the Netherlands each have more than 150 companies. Brazil and South Africa, developing countries with large shares of certified plantation forests, have more than 100 companies with CoC certificates.

GRAPH 9.4.1

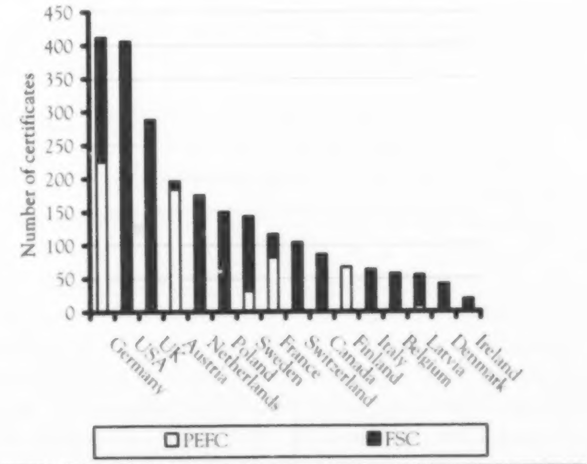
Certification chain-of-custody trends worldwide, 1997-2003



Sources: Forest Stewardship Council and Pan European Forest Certification with authors' data interpretation, 2003.

GRAPH 9.4.2

Chain-of-custody certificate distribution in the UNECE region, 2003



Sources: Forest Stewardship Council and Pan European Forest Certification, 2003.

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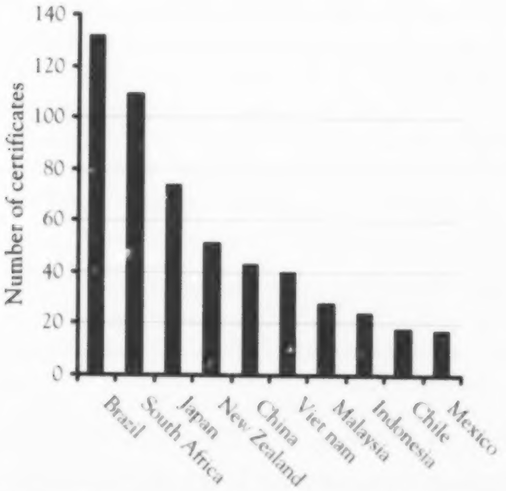
[62] Chain-of-custody certificates specify the channel through which products are distributed from their origin in the forest to their end use. (source: www.fscoax.org).

An analysis of the distribution of CoC certificates across the product range offered shows that companies from all wood-based industries and trade sectors hold CoC certificates. Companies holding CoC certificates of FSC (80% of the total) cover a comparatively wide range of sectors, while the majority of companies offer products for construction (structural and non-structural components) and furniture, as well as sawmilling products (graph 9.4.4). Companies holding CoC certificates of PEFC (20% of the total) are mainly active in sawmilling and timber trade, i.e. more upstream sectors in the value chain. Especially in eastern European countries, where CoC certification started only recently, a doubling of CoC certificates is expected over the coming years (e.g. in Romania). Increasing the number of CoC certificates is still a major goal of certification initiatives, *inter alia* as a means to increase awareness and interest in CFPs along distribution chains.

GRAPH 9.4.3

Chain-of-custody certificate distribution outside the UNECE region, 2003



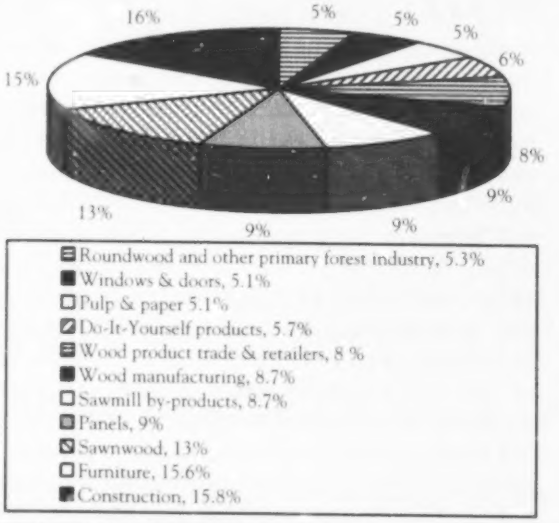
Note: Outside the UNECE region all CoC certificates are by FSC.
Sources: Forest Stewardship Council and Pan European Forest Certification, 2003.

The Global Forest and Trade Network (GFTN), designed to create demand for CFPs by the World Wide Fund for Nature (WWF) through WWF Buyers and Producers Groups, comprises around 800 members in mid-2003, about the same number as in past years. Active in around 30 countries worldwide, more than half of these companies are located in Europe.

While the FSC logo has been around for a decade now, others, such as the PEFC, started to issue licences for logo use only comparatively recently, in 2001. A total of 7890 companies to date (of which 70% are in Germany and 25% in France) have the right to use the PEFC logo. Both the SFI and the CSA systems in North America have developed logos.

GRAPH 9.4.4

FSC worldwide chain-of-custody distribution by industry sector, 2003



Source: Forest Stewardship Council, 2003.

9.4.2 *Final consumer demand*

9.4.2.1 *Private consumers*

Demand by private end consumers remains an insignificant factor in the market for CFPs. Nevertheless, general consumer sentiment on deforestation, forest degradation, loss of biodiversity and, notably, on tropical deforestation, keeps the sector under pressure to act. Research also shows that, other things being equal, consumers prefer CFPs over identical non-certified products. (Anderson and Hansen 2003).

Forest certification is increasingly becoming a main instrument for communication on sustainable forest management throughout the forest and trade sectors, with enhanced public relations efforts by programmes such as PEFC. However, consumer awareness of even the longest established logo on CFPs, that of the FSC, is still low in markets such as those in Germany, the Netherlands and Austria, with somewhat higher rates of logo recognition in more established markets, such as the United Kingdom, where increased logo recognition has been claimed by FSC, based on data from surveys.

In eastern Europe, the driving force for certification is not domestic consumer demand, but export markets and demand by certain major retailers. This retailer-driven demand can also be recognized in North America, although, according to experts, certification is not necessary for market access, and will not be in the near future.

Many players active in the market see the lack of consumer awareness and interest as a major obstacle for market growth.

9.4.2.2 *Public policy evolution*

Public procurement policies, newly introduced or currently under discussion by Governments, continue to be a driving force for certification and a growing source of potential demand for CFPs. Several national Governments in European markets, including those of the United Kingdom, the Netherlands, Denmark, France and Germany, have announced public procurement policies that include criteria favouring the purchase of CFPs, notably from tropical countries. Similar policies exist at municipal levels in several European countries. The United Kingdom Government was one of the first to set up a procurement policy and issue a guidance document on timber procurement in 2000. However, systematic evidence of any significant change in the pattern of timber procurement still seems to be lacking, and the Government conceded that implementing its timber procurement policy has been more of a challenge than initially anticipated (UK House of Commons 2003). More recently, the German Ministry of Environment announced support for sourcing timber from forests managed according to FSC standards by 2006. While not all policies are implemented fully, they indicate the direction of policy development, especially as the underlying situation in the tropics is unchanged.

Over the past year, the topic of illegal logging has dominated the agenda of governmental politics related to forest products. In the course of the intense debates, it became clear that not only is illegal logging a very complex and elusive subject, but also that policies will keep the legality of timber as a distinct issue from the quality of forest management and certification of sustainable forest management. However, some form of "certification of legality" may be developed.

9.5 Outlook and conclusion

After a decade of development and introduction of forest certification and CFPs and much heated debate, forest certification seems to have set sail into less turbulent waters and has made some smooth progress. Certification of forests in Europe has reached a first peak, and forest certification is expected to continue to grow smoothly in some eastern European countries and North America. The focus on forest certification seems now to shift more to awarding of CoC certificates and to bringing other continents up to par with the Northern hemisphere and into the existing forest certification umbrellas.

Certification systems have also acknowledged the fact that persistent and effective communication is necessary to raise the awareness of the general public and the private consumer, and that forest certification is indeed a key tool to position wood as a renewable resource, and to improve the green image of the forest sector. Nevertheless, a breakthrough in mutual recognition, largely absent from open debates in the last year, has not been reached.

The situation is quite different for tropical forests. Considerable further effort is needed to build up credible certification schemes through phased approaches, as are being developed by the ITTO. For all but the most important international suppliers of wood products, such as Malaysia and Brazil, this is a long-term uphill struggle of capacity building that requires long-term commitment by funding partners in developed countries. Most countries will only gradually be able to participate in the international trade of CFPs. However, it is important to keep in mind that to alleviate deforestation and degradation in developing countries, managing national consumption, and not international trade, is closer to a solution.

This chapter attempted to give an update on the market situation of CFPs in the UNECE region. Owing to a lack of CFP information in official statistics, comprehensive and objective information of this new market sector remains difficult.

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Stichting Keurhout, www.stichtingkeurhout.nl.

Chapter 10

Trade in secondary-processed wood products slowed: Value-added wood products markets, 2001-2003[63]

Highlights

- International furniture trade is continuing to create more export opportunities for central and eastern European countries and for developing countries, even though 2001 witnessed a 2 to 3% fall in imports in key world markets.
- China is overtaking the world's number two and three furniture exporters, Germany and Canada, all three trailing Italy.
- Lower cost Asian furniture imports led some United States furniture manufacturers to close manufacturing facilities and concentrate on their marketing strengths.
- Engineered wood products (EWPs) production and consumption are growing phenomenally in North America – they now comprise 5% of structural lumber demand.
- Builders' joinery and carpentry trade is growing in wooden doors, shingles and shakes, although wooden windows have been losing ground since 1997.
- Intense competition fostered by globalization is driving demand for EWPs as well as decreased availability of large-diameter timber, new conversion technology and worldwide adoption of performance-based building codes.
- Both product and business innovations are necessary in traditional wood products markets, which rely too heavily on residential housing markets.
- Higher value-added processing motivates new countries to develop secondary-processed wood products exports, however, there is a risk of falling into a cycle of growth without prosperity, thereby reducing the financial resources available for sustainable forest management.
- As new countries enter the export business, their competitiveness depends mostly on lowering production costs and product prices against immediate regional rivals, instead of real product and process-related strengths such as better materials, operational efficiencies, total quality and enhanced design and marketing.

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The text in this chapter is a condensed version of the discussion paper "Trade In Secondary Wood Products Stalled Temporary – A Race To The Bottom? Value Added Wood Products Markets, 2001-2003", which will be available early 2004 at our website: www.unece.org/trade/timber.

Secretariat introduction

Demand for primary forest products, such as sawnwood and panels, is reflected in the trade of value-added products[64] Only by analysing trade flows of secondary-processed forest products can a market analysis be complete. This chapter is divided into two parts: (1) value-added products of furniture and joinery, and (2) engineered wood products. The international trade of value-added forest products is an indication of national capabilities to produce for the export market, and in many countries a significant domestic market exists as well. Some production of primary products is not accounted for in statistics when integrated processing occurs, for example, from log processing directly through furniture component manufacturing.

Mr. Jukka Tissari, Market Development Officer in Wood Products, International Trade Centre UNCTAD/WTO (ITC[65]), analysed the value-added markets for the second year. Since much of his work is with developing countries, he draws many examples from further processing of tropical timber. The secretariat thanks him for his continued participation in our work. He is a member of the UNECE/FAO Team of Specialists on Forest Products Markets and Marketing. He authored all sections except the one on engineered wood products.

Valuable insight on the North American engineered wood products market was again provided by Mr. Craig Adair, Director, Market Research, APA-the Engineered Wood Association and Dr. Al Schuler, Research Economist, USDA, Forest Service. Dr. Schuler is also a member of the UNECE/FAO Team of Specialists on Forest Products Markets and Marketing. They have updated their more lengthy analysis published in the *Forest Products Annual Market Review*, *1999-2000*, and its updates for the *Review 2000-2001* and *2001-2002*. Engineered wood products continue to innovate in their design and applications. They were part of the solution to the "sound use of wood" policy as recommended at the UNECE Timber Committee and FAO European Forestry Commission seminar in Romania in 2003.

Statistics in this chapter do not yet come from the Joint Forest Sector Questionnaire, as in the preceding statistically based chapters. Although the Questionnaire does contain some questions on important value added forest products trade, the responses have been insufficient to produce a basis for this chapter's analysis. Instead, the authors draw on UN COMTRADE[66] statistics for the major countries involved in the international trade of further-processed wood products. The most current available COMTRADE statistics are for 2001. For engineered wood products, statistics are from the APA—the Engineered Wood Association.

10.1 Introduction

While the trade of value-added forest products slowed in 2001 (the latest data available), their share of the world timber trade has been growing. Exports of further-processed wood products from central and eastern European countries (CEECs) and developing countries, especially tropical timber producers, continue to take a larger share of the trade from primary products, such as logs. By analysing the trade of value-added products, the demand for their raw materials, such as sawnwood, panels and veneer is better understood. While those primary product markets are analysed in the previous chapters, this chapter uses examples of furniture, builders' joinery and carpentry, profiled wood and engineered wood products to analyse the secondary-processed products market developments.

Trade and economic development policies influence the value-added products markets in much the same way as primary products trade and manufacturing. The major western import markets have increasingly grown more conscious about the sustainability of timber, especially of tropical timber products. It is therefore no surprise that the source of value-added wood products is an issue for importers. For tropical timber producers, market access is therefore a legitimate concern. When properly developed, the higher value-added wood products appear to carry a particular promise for sustainable development of forest industries for both CEECs and tropical countries.

10.2 Import trends of secondary processed wood products in 2000-2001

10.2.1 Wooden furniture by product groups

World imports of wooden furniture and parts amounted to $32.1 billion in 2001, which was 2.8% less than the $33.0 billion peak reached in 2000. This includes furniture parts and components made of all materials. Without parts, the wooden furniture trade amounted to $27.5 billion in 2001, down by 2.5% from $28.3 billion in 2000 (graph 10.2.1).

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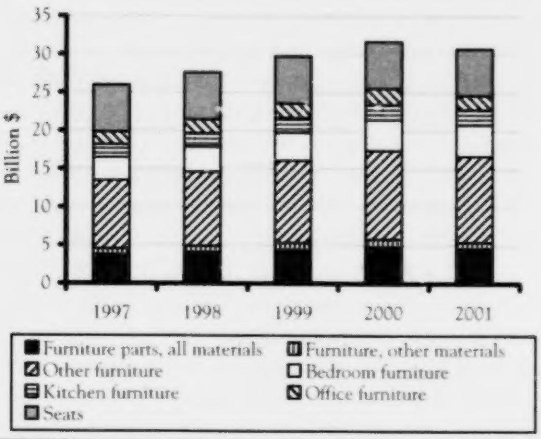
[64] "Value-added", "secondary-processed" and "further-processed" are terms used synonymously throughout the chapter.

[65] International Trade Centre, UN Conference on Trade and Development and the World Trade Organization.

[66] UN trade database showing trade by direction for over 100 countries since 1960s for all SITC and HS codes. Based on national customs statistics

GRAPH 10.2.1

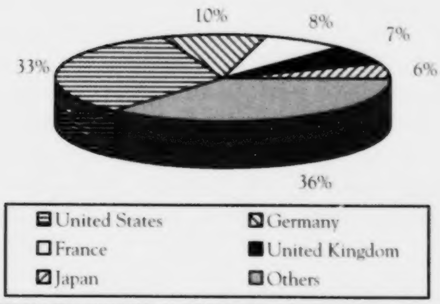
World imports of wooden furniture by product group, 1997-2001



Note: Seats are of wood, cane, osier, bamboo, etc.
Source: UN COMTRADE, 2003

GRAPH 10.2.2

Major importers of wooden furniture and parts, 2001



Note: World imports $32.1 billion.
Source: UN COMTRADE, 2003.

Even though the long-term growth trend in imports appears to be firmly in place, the year 2001 produced at least a temporary slowdown for trade, reflecting the economic woes in major markets. Nevertheless, imports from the developing market economies have continued to grow faster than overall imports in most major markets. The global impact of Chinese furniture production will strengthen due to the capacity expansion currently underway. Asian furniture exports have led to falling production in some UNECE region countries, e.g. the United States. Some furniture manufacturers have closed their United States production facilities, as they were no longer competitive against imported products. In turn, some have decided to focus on their marketing strengths and have established market channels, thereby keeping the company in business.

Top-5 importers accounted for 65% of the world furniture trade. The United States alone purchased one third ($10.7 billion) of all imports, followed by Germany ($3.3 billion), France ($2.6 billion), the United Kingdom ($2.3 billion) and Japan ($1.9 billion) (graph 10.2.2).

10.2.2 Builders' joinery and carpentry and profiled wood

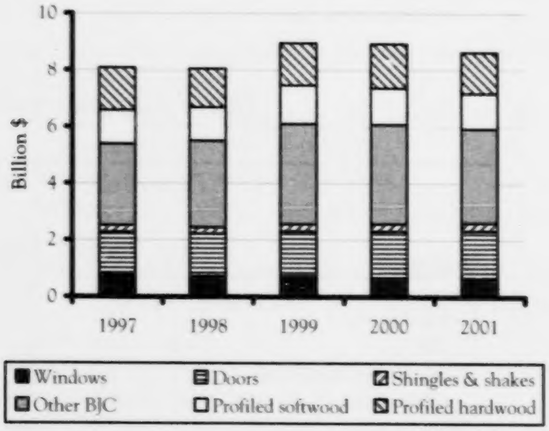
World imports of builders' joinery and carpentry (BJC) slipped 2.4% in 2001 from previous year, to $5.9 billion. Profiled wood suffered a greater decline, after losing 5.3% of import value in 2001, down to $2.7 billion (graph 10.2.3).

The top-5 import markets accounted for 60% of world trade in BJC, with the United States alone taking 29% of imports (graph 10.2.4). Declines in Germany and Japan contributed most to the overall fall of world imports, compounded by diminishing imports by France, Austria, and the Netherlands. The United States, the United Kingdom and Italy recorded growing imports in 2001.

As for imports of profiled wood, only Italy and France continued to expand their imports in 2001. All other markets imported less than in 2000. Profiled wood market share is also dominated by the United States, with Japan taking a higher share than with BJC (graph 10.2.5).

GRAPH 10.2.3

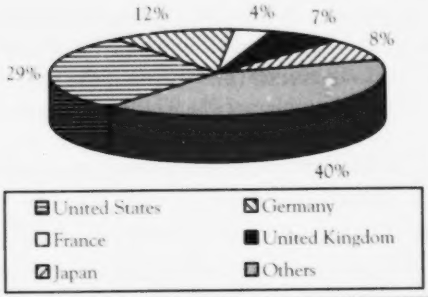
World imports of builders' joinery and carpentry and profiled wood by product group, 1997-2001



Source: UN COMTRADE, 2003.

GRAPH 10.2.4

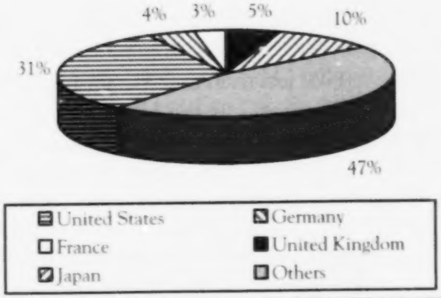
Major importers of builders' joinery and carpentry, 2001



Note: World imports $5.9 billion.
Source: UN COMTRADE, 2003.

GRAPH 10.2.5

Major importers of profiled wood, 2001



Note: World imports $2.7 billion.
Source: UN COMTRADE, 2003.

10.3 Origins of imports in 2000 and 2001

10.3.1 Wooden furniture

Origins of imported wooden furniture continued to shift towards Asia, mainly China, in 2001, to the detriment of European and Canadian suppliers (table 10.3.1). Pushed by active export promotion policies and a liberalized foreign investment climate, China's penetration in the United States furniture market shows massive gains for 2001 in finished wooden furniture, and a $59 million additional export in semi-finished parts.

Trade patterns are fairly similar in the major European markets, as Italy is the prime source of furniture parts for the United Kingdom, France and Germany. These markets have not been taken over by Chinese imports, a pattern that is now clear in Japan (33% from China). Eastern European exports of wooden furniture and parts keeps growing and are likely to become the main source of Germany's imports.

10.3.2 Builders' joinery and carpentry and profiled wood

In BJC, more than 90% of Japan's imports come from three regions, Asia, Europe, and North America. Europe has continued to win market shares from North American and Asian competitors (table 10.3.2). Decking applications have been one new growth opportunity within the profiled wood segment. But building and furniture industries traditionally continue to use the bulk of imported profiles.

TABLE 10.3.1

Origins of five major countries' furniture imports, 2000-2001

(%)

	United States		*Germany*		*France*		*United Kingdom*		*Japan*	
Regions	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*
Asia	47.0	48.4	9.2	8.4	14.4	14.0	31.4	29.2	79.6	80.6
North America	23.8	23.2	0.4	0.3	0.9	0.8	3.6	2.8	4.7	4.0
EU/EFTA	18.4	17.6	45.4	45.2	67.6	67.3	47.1	49.4	14.7	14.4
Eastern Europe and Russia	1.4	1.3	41.2	42.7	10.2	11.2	8.7	10.0	0.5	0.5
Latin America	8.5	8.5	1.5	1.0	5.0	4.3	3.6	3.2	0.1	0.1
Others	1.1	1.1	2.4	2.4	1.9	2.5	5.6	5.3	0.4	0.4
Total imports billion $	9.5	9.4	2.8	2.9	1.9	1.8	1.8	2.0	1.6	1.6

Note: Excluding furniture parts.
Source: UN COMTRADE, 2003.

TABLE 10.3.2

Origins of five major countries' builders' joinery and carpentry imports, 2000-2001

(%)

	United States		*Germany*		*France*		*United Kingdom*		*Japan*	
Regions	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*
Asia	12.2	10.0	12.9	8.4	15.8	15.4	21.4	19.9	30.3	30.0
North America	68.2	67.4	0.5	0.3	1.1	1.9	7.1	7.7	26.4	23.2
EU/EFTA	5.9	6.0	49.8	51.2	72.8	72.6	50.0	52.4	35.0	37.9
Eastern Europe and Russia	0.5	0.5	29.4	32.8	5.9	5.7	6.3	5.7	2.1	1.9
Latin America	12.1	14.5	0.3	0.3	3.0	3.1	6.8	5.3	0.2	0.2
Others	1.0	1.4	7.1	6.9	1.3	1.3	8.3	9.1	6.0	6.8
Total imports billion $	1.7	1.7	0.9	0.7	0.2	0.2	0.4	0.4	0.5	0.5

Source: UN COMTRADE, 2003.

TABLE 10.3.3

Origins of five major countries' profiled wood imports, 2000-2001

(%)

	United States		*Germany*		*France*		*United Kingdom*		*Japan*	
Regions	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*	*2000*	*2001*
Asia	18.0	15.0	11.3	12.7	6.2	7.0	25.1	21.8	70.3	72.5
North America	28.7	25.1	1.5	2.5	2.0	1.5	15.8	14.6	16.3	12.6
EU/EFTA	4.1	4.1	60.9	59.4	74.1	74.3	53.5	58.0	10.5	11.5
Eastern Europe and Russia	0.6	0.6	22.7	22.3	9.5	10.3	1.8	2.2	-	0.1
Latin America	43.0	49.7	0.6	0.4	5.6	4.0	2.1	1.4	0.8	1.4
Others	5.6	5.5	3.1	2.8	2.6	3.0	1.5	2.0	2.1	2.0
Total imports billion $	0.9	0.9	0.1	0.1	0.1	0.8	0.2	0.1	0.3	0.3

Source: UN COMTRADE, 2003.

Latin American suppliers (mainly Mexico, Chile, Brazil) have grasped a dominant 50% share of the United States imports of profiled wood before North America (25%) and Asia (15%), which have both lost ground after 2000 (table 10.3.3). Decking applications have been one new growth opportunity within the profiled wood segment. However, building and furniture industries traditionally continue to use the majority of imported profiled wood.

10.4 Market drivers and developments for value-added wood products

Market drivers that influence the further development of tropical wood product industries in particular, also have implications for the development of wood industries worldwide. The compilation below is rough and non-exhaustive in the sense that industries adjust to the given conditions differently in various market segments and product sectors.

Market drivers for tropical value-added processing include:

- Rainforest deforestation and associated ecological and social concerns (sustainability, responsibility)
- Consumer fashion (light-coloured woods have been dominant)
- Substitutes for wood (aluminium, steel, PVC, fibrous plants)
- Substitution between woods (temperate hardwoods, fast-growing plantation woods, softwoods)
- Consolidation and globalization of (mainly) northern forest products manufacturers and marketers.

Governments and industry have responded to these market drivers through:

- Embarking on certification of sustainable forest management and chain-of-custody
- Making more efficient use of residues
- Moving to higher value-added products from plantations
- Producing new products, such as EWPs, or products with material combinations, and diversifying product mix
- Outsourcing and sub-contracting: restructuring of industries into attractive lowest-cost bases.

Sawnwood and plywood markets are very competitive, and largely controlled by consolidating companies with more efficient production and marketing capacities and proximity to main markets. Conversely, tropical producers with a more fragmented industry have faced falling prices and oversupply, partly bottlenecked by new product technical standards and buyers' requirements, e.g. on certification.

Trade in secondary processed tropical wood products – mainly furniture – has increased impressively and now accounts for over 40% of the combined primary and secondary products trade value from tropical timber. In addition, many of the value-added products are made from plantation grown timber, which is of uniform quality and in sufficient volume, and has fewer environmental concerns. Value-added products also bring higher unit prices along a more diverse range of products, many of which are not sold by species, but rather for a specific end use. They also offer important ways for improving processing efficiency through utilization of intermediate products, as well as optimizing the timber properties to specific end uses.

On the other hand, further processing is not a cure-all solution and can in fact lead to falling profitability for the company if it is not based on thorough assessment of material flows, processes, costs, prices and revenues. Exports of primary processed products can offer better returns per unit than exports resulting from a poorly implemented further processing investment.

There are some positive examples of how secondary processed wood products have won back market shares from competing materials by efficiently embarking upon development of technical standards. One such case can be reported from the United Kingdom wood windows industry. As a result of some systematically planned efforts undertaken, the quality image and environmental status of wooden windows has been elevated in the United Kingdom. The industry is today confident of winning back half of the new buildings market from substitutes within three years, and reaching half of the total market (including replacements) by 2010. Even unexpected backers have emerged: Greenpeace, an environmental NGO, has pledged open support to timber windows over PVC, based on timber's superior environmental performance when supplied with appropriate forest certification (*TTJ Timber Trades Journal* (various issues) and "The European Window Markets", Euro Windoor, 2001).

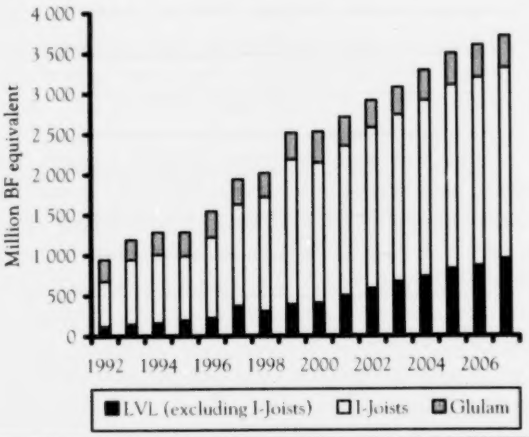
10.5 Potential for growth without prosperity

The potential gains of higher value-added processed products point towards developing exports of furniture and other secondary processed wood products. However, there is a risk of tropical countries falling into a cycle of growth without prosperity in these sectors.

Prices have influenced market development and value-added processing. Since roundwood and real commodity product prices have been in decline and more irregular, the movement has been towards higher value-added products. The prices of most commodities, wood products included, have continued to decline in real terms for decades, despite the projections presented from time to time of looming shortages, which would boost prices. This has already been well demonstrated in wooden chair seats, for example, where the production cost of a rubberwood Windsor style chair seat has fallen from around $11 each five years ago to approximately $8 in Malaysia currency, and as low as $5 in Viet nam!

GRAPH 10.6.1

Production and consumption of engineered wood products in North America, 1992-2007



Notes: BF equivalent is the volumes of these 3 engineered wood products converted into board feet. Forecasts by APA – the Engineered Wood Association, 2003.

Source: APA, *Regional Production and Market Outlook*, APA Economics Report E169, 2003.

However, there are always additional costs being incurred from product development, standardization, marketing and internalizing environmental costs, (e.g. certification start-up costs). When companies cannot appropriately recover their costs amidst fierce price competition, a "desperation production" cycle may occur to achieve sales and maintain cash flow. Profit declines and a "race to the bottom" may ensue unless prevented by product diversification and clever marketing.

Falling unit costs benefit retailers and buyers' groups from the industrialized countries, who achieve extra earnings. Only part of the manufacturing cost reductions are passed on to retail prices of final products. International buyers are well equipped to reinforce this trend through their bargaining power between the most cost-competitive supply chains worldwide. The costs are borne disproportionably by forest owners and managers in developing and developed countries alike, who find it more difficult to find the necessary resources for sustainable forest management.

10.6 Engineered wood product markets[67]

10.6.1 Overview of current markets

This section focuses on the North American market for glulam, I-beams[68] and laminated veneer lumber (LVL). While most of the engineered wood products (EWPs) are produced, traded and consumed in North America, two products are experiencing substantial production capacity increases outside North America – glulam and LVL. In addition, there are modest increases in European I-beam manufacturing capacity. And, as mentioned in previous issues of the *Forest Products Annual Market Review*, the predominance of wood-frame housing in North America favours EWPs, which are used primarily in structural applications.

Growth in EWPs production and consumption has been outstanding with glulam, I-beams and LVL now comprising about 5% of structural lumber demand in North America (graph 10.6.1). The number of EWP plants in North America has more than doubled in the past decade, growing from less than 60 plants in 1989 to more than 120 today. In addition, more plants are producing new generations of EWPs, such as oriented strand lumber (OSL) and improved glulam products. Additionally, EWPs are produced with a wider variety of species, e.g., more hardwood LVL and a mixture of species used in the manufacture of OSL. Furthermore, the industry is enhancing existing products with hybrid formulations.

There are many factors driving demand for EWPs: decreased availability of old growth timber, new conversion technology, better adhesives technology, worldwide adoption of performance-based building codes and the intense competition fostered by globalization.

10.6.2 Glulam

North American glulam production fell almost 7% in 2002, owing to the slowdown in non-residential activity and exports (table 10.6.1). Glulam end uses depend heavily on residential markets (65%), with the next largest segment being non-residential applications (27%) (figure 10.6.1). The remaining 8% of the market is equally divided between export and industrial uses.

TABLE 10.6.1

Glulam production and trade in North America, 2001-2004
(1,000 m^3)

	2001	*2002*	*2003f*	*2004f*
Production				
United States	790.1	757.1	761.8	787.7
Canada	59.0	40.1	47.2	47.2
Total	849.1	797.2	809.0	834.9
Trade				
United States exports	40.1	33.0	35.4	37.7
United States imports	23.6	21.2	25.9	28.3
Canadian exports	30.7	16.5	18.9	18.9

Note: f = forecast by APA
Source: APA – the Engineered Wood Association, *Regional Production and Market Outlook*, APA Economics Report E168, 2003.

The key for growth is the non-residential sector since building designers embrace the provisions of the International Building Code that allow greater heights and areas for wood construction. Furthermore, as 65% of glulam currently goes to residential end uses, this suggests that market diversification may be a good strategy. European glulam manufacturers are currently trying to penetrate North American markets, but to date, with limited success.

FIGURE 10.6.1

Glulam growth potential lies in the non-residential sector

Source: APA, 2003.

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[67] By C. Adair, APA –the Engineered Wood Association, and A. Schuler, USDA Forest Service

[68] I-beams are synonymous with I-joists.

10.6.3 Wooden I-beams

After increasing 7% in 2001, North American I-beam production increased 6% in 2002 to almost 300 million linear metres (table 10.6.2). APA expects production to continue growing over the next several years; however, the rate of growth is expected to taper off (APA Report E169, 2003).

TABLE 10.6.2

North American I-beam production and forecast, 2001-2004

(million linear metres)

	2001	*2002*	*2003f*	*2004f*
United States	227	230	236	236
Canada	55	69	78	82
Total	282	299	314	319

Note: f = forecast by APA

Source: APA – the Engineered Wood Association, *Regional Production and Market Outlook*, APA Economics Report E169, 2003.

There will be a variety of alternative designs, ranging from LVL flanges with OSB webs, to machine stress rated (MSR) and conventional solid sawnwood flanges and more recently, Timberstrand™ or laminated strand lumber[69] (LSL) flanges. LSL is a relatively new EWP which is similar to OSB, but with longer flakes. These developments are aimed at providing the most efficient I-beam configuration for each application. Most of the trade in I-beams is cross border between Canada and the United States, with about 45% of Canada's production flowing to the United States.

10.6.4 Laminated veneer lumber

North American LVL production, mostly softwood, totalled 1.8 million m^3 in 2002, an increase of 6% from 2001 (table 10.6.3). The demand for LVL is driven primarily by residential construction activity, as 50% is used to construct I-beam flanges and 43% is used in header and beam applications (figure 10.6.2). Growth in 2002 was driven primarily by increasing demand for LVL beams and headers in a strong housing market.

LVL production outside North America is increasing primarily in Oceania and Asia (graph 10.6.2). In Asia, much of the new capacity is for both structural and non-structural applications are in Japan.

TABLE 10.6.3

North American LVL production, 2001-2004

(1,000 m^3)

	2001	*2002*	*2003f*	*2004f*
United States	1 513	1 589	1 683	1 768
Canada	156	173	187	215
Total	1 669	1 762	1 870	1 983

Note: f = forecast by APA

Source: APA – the Engineered Wood Association, *Regional Production and Market Outlook*, APA Economics Report E169, 2003.

Figure 10.6.2

I-beams and LVL oriented to residential end uses

Source: APA, 2003.

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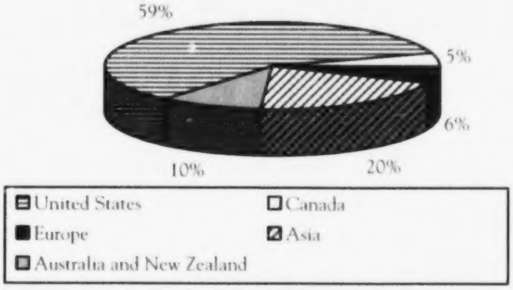
[69] In this chapter, "lumber" is used synonymously with sawnwood.

GRAPH 10.6.2

World LVL capacity, structural and non-structural, 2002



Source: *Laminated Veneer Lumber (LVL) and other Laminated Wood Products in the Pacific Rim, 1998 to 2003*, BIS Shrapnel Forestry Group, New Zealand, 2003.

10.6.5 *Outlook for EWPs – an answer to both globalization and the price cost squeeze?*

Wood product companies all over the world are facing a more competitive environment – global competition, fierce substitute products at home, powerful do-it-yourself retailers, and elevated environmental consciousness – all of which are impacting profitability (Wagner, E. "Wood Products Sector: Achieving Competitive Advantage in the 21st Century", Oregon State University Research Brief, 2003). They also share a common problem with other manufacturers of commodity products –a recent and prolonged period of deflationary prices driven by globalization trends that are causing a cost/price squeeze. Costs are increasing, but global competition does not allow manufacturers to raise prices. Many analysts are suggesting that the solution includes an emphasis on more value added products and processes. However, Wagner suggests both product and business innovation are necessary, not just process innovations. Facing this sort of business environment, EWPs can provide the wood products industry with a much-needed boost.

Although EWPs have a bright future, another problem, also facing other wood products, is a reliance on one market sector. Structural lumber and panel products rely on residential construction (new housing construction and remodelling) for 75% of their demand. EWPs, at least in North America, are even more concentrated, with most of the LVL, I-beams, and glulam going into single-family construction.

Irrespective of the concentration level, EWPs, with their superior predictable performance, are better positioned to gain market share in non-residential and residential building applications as the world construction industry embraces performance-based building codes. Furthermore, particularly in the UNECE region countries, demographic trends will dictate changes in building practices that favour the adoption of labour-saving technology. For example, as in other manufacturing sectors, industrialization trends have accelerated because they reduce labour content. For building construction, particularly housing, this means more of the house components are built in the factory, and then transported to the building site.

Building by using components, ("componentization"), favours products with predictable performance – engineered wood products – because it allows more efficient building design, hence less waste in the factory and at the job site. Another factor, "green building materials", is increasingly gaining favour with architects, design engineers, builders and the general public. EWPs are viewed as being "greener" than conventional wood products. In a life-cycle cost perspective, EWPs are "greener" than steel and concrete (Bowyer, *et al*, *Forest Products Journal*, May 2001). EWPs should in the future help the wood products industry capture market share and become more profitable in an increasingly competitive global marketplace.

10.7 References

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Chapter 11

China's imports drive tropical timber trade: Trends in tropical timber markets, 2002-2003[70]

Highlights

- China consolidated its position as the world's largest tropical log and sawnwood importer in 2002.
- Log exports from tropical countries fell almost 20% to 12.8 million m^3 in 2002 due largely to export bans in Africa and Indonesia.
- China's imports of tropical plywood are shrinking, but the country is becoming a significant tropical plywood exporter based on imported logs.
- Low prices and over-capacity persist in the tropical plywood sector.
- Tropical countries are increasing exports of reconstituted panels, pulp, paper and secondary-processed wood products.
- Certification of sustainable forest management is a concern for many tropical exporters, inspiring some countries, led by Malaysia and Indonesia, to develop national schemes and to seek recognition from international certification systems.
- Increasingly, Governments and other stakeholders are developing new ways of cooperation to improve forest law enforcement and governance; for example, bilateral agreements to reduce trade in illegally sourced forest products.
- The United Nations Security Council has prohibited imports of wood products from Liberia, as revenue from timber exports by that country has increasingly been used for illegal arms transactions.

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The text in this chapter is a condensed version of the discussion paper " China's Imports Drive Tropical Timber Trade: Trends In The Tropical Timber Trade, 2002-2003", which will be available early 2004 at our website: www.unece.org/trade/timber.

Secretariat introduction

This analysis is possible thanks to continued close cooperation with our colleagues in the International Tropical Timber Organization, specifically Drs. Steven E. Johnson and Michael J. Adams and Ms. Masaki Miyake. Drs. Johnson and Adams are the principal authors of the ITTO *Annual Review and Assessment of the World Timber Situation*[71] and *Market Information Service*[72], respectively, from which this chapter was drawn. Like our *Forest Products Annual Market Analysis*, ITTO's *Review* is the basis for an annual market discussion, which has also contributed to the updated analysis here. The present analysis is abstracted from their much longer analysis in an accompanying UNECE/FAO *Geneva Timber and Forest Discussion Paper*[73]. Drs. Adams and Johnson are members of the UNECE/FAO Team of Specialists on Forest Products Markets and Marketing.

Readers will note that some of the terminology differs slightly from the rest of the *Annual Market Analysis*. Where possible the authors have focused their analysis on tropical trade developments in the UNECE region. ITTO categorizes its members into producer (tropical) and consumer (non-tropical) countries. Only ITTO member countries are covered, but these constitute 95% of all tropical timber trade.

11.1 Introduction

In 2002 the global tropical timber sector continued to develop following the trauma of the late 1990s, although trends differed significantly between markets. China's increasing imports continued to drive the tropical log and sawnwood markets, with the country also becoming a significant tropical plywood exporter based on imported logs. Japan's tropical plywood imports are still relatively stable, but domestic production is plummeting along with tropical log imports. Many producer countries continued their shift to secondary processed products exports in 2002; trade in these products continued to rise, while primary tropical timber products trade declined. The volume of the latter trade is still larger, but the difference between the two is shrinking. This chapter discusses trends in trade and prices of major primary tropical timber products to mid-2003. Trends in secondary products are covered elsewhere in this *Annual Market Analysis*. Exports of reconstituted panels and woodpulp and paper products from tropical countries are included here since these products (predominantly based on plantation resources) are assuming increasing importance in several countries.

11.2 Export trends

11.2.1 Industrial roundwood (logs)

The share of logs in total primary tropical timber exports of ITTO producers (in terms of both value and roundwood equivalent (rwe) volume) fell dramatically in 2002 to 23%, the first time this ratio has dropped below one quarter, continuing a steady decline from highs of over 60% during the 1980s. Only Africa continues to export a significant volume of logs compared with processed products. Its log exports made up 54% of total roundwood equivalent export volume in 2001, but dropped to less than 50% of total export volume in 2002 as export restrictions took effect in several countries. The Asia – Pacific region has rapidly replaced log exports with the export of processed primary products, spurred by Indonesian plywood exports and Malaysian exports of sawnwood, veneer and plywood. Asian log exports made up 25% of total Asian export volume in 2001 and 2002 (about 15% of log production). Latin American tropical log exports are a small fraction of both production and total exports. The decreasing roundwood equivalent levels of primary product exports are offset by increased exports of secondary products (SPWP), particularly from Indonesia, Malaysia, Brazil and Thailand (table 11.2.1).

Indonesia's main log-trading partners are China and Malaysia. Both signed agreements with the Government of Indonesia in 2002 to regulate illegal trade, resulting in a slump in exports (graph 11.2.1). Following IMF guidance, Indonesia resumed log exports in 1999 after a 13-year moratorium. Malaysia alone reported imports of 715,000 m^3 of Indonesian logs in 2001 compared with 3,000 m^3 reported as exported by Indonesia, while China's reported imports (over 1.1 million m^3) were more than two hundred times greater than the level reported by Indonesian customs authorities, supporting the claims of many observers that substantial undocumented or illegal Indonesian log exports existed. Indonesia has now re-implemented its log export ban to attempt to reduce illegal exports and ensure sufficient log supplies for domestic mills, and has requested trading partners to assist in stopping the flow of smuggled logs.

Both Cameroon and Gabon are attempting to promote increased local processing and have imposed limitations on log exports, although these are being implemented more strictly in Cameroon. Liberia's civil war (which led to drastic decreases in official log production and exports for most of the 1990s) was temporarily resolved in 1998, leading to a resumption of

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[71] www.itto.or.jp/inside/review2002/

[72] www.itto.or.jp/market/Market_Information.html

[73] www.unece.org/trade/timber/docs/dp/…

TABLE 11.2.1.

Composition of exports by producing regions, 2000-2002

(1,000 m^3 rwe)

	Log production			*Log exports*			*Processed exports*			*Total exports*		
Region	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
Africa	13 287	12 980	12 814	4 836	4 551	4 120	5 017	3 922	4 254	9 853	8 474	8 375
Asia-Pacific	76 964	73 105	72 019	11 516	11 092	8 417	35 982	34 122	33 785	47 497	45 214	42 201
Latin America	35 864	35 805	35 899	195	254	267	3 559	4 441	4 021	3 753	4 696	4 288
Total	126 115	121 890	120 732	16 546	15 898	12 804	44 558	42 485	42 060	61 104	58 383	54 864

Notes: Totals may not sum exactly due to rounding. Processed exports is the sum of sawnwood, veneer and plywood (rwe)

Sources: ITTO, 2003

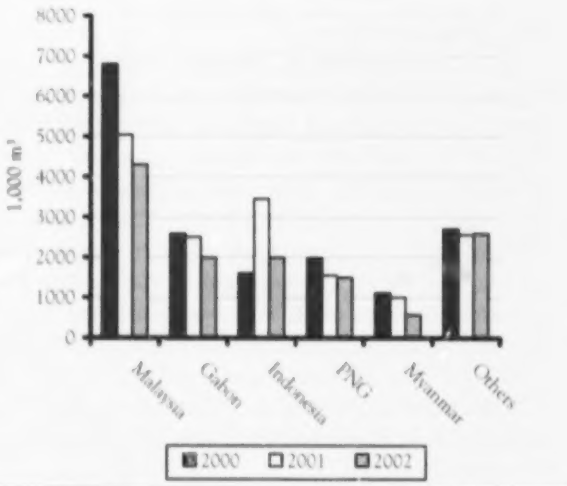
log exports, which have grown rapidly to offset declines from other African countries. Liberia's exports increased by 6% and 9% in 2001 and 2002 respectively, reaching almost 1 million m^3, with most of these logs destined for China and Europe. Renewed conflict in Liberia, and the resulting trade measures imposed by the United Nations Security Council (see below), will limit further export growth.

The encouraging signs of improvement in tropical log export prices seen in 2000 and 2001 were not sustained into 2002 and fears of further declines were realized in late 2002 through to the first half of 2003. The momentum of price improvements for African and Asian logs was not maintained into 2003 (graph 11.2.2). African suppliers have, however, fared better than suppliers in Asia where FOB prices have stubbornly held at levels some 30-40% below those seen prior to the Asian financial crisis.

The different price trends experienced by log exporters in the African and Asian regions reflect the differing impact of their two distinct major markets of Europe and Japan/China. In Asia, log prices have been seriously and negatively affected by the continued weakness of demand for wood products in Japan and by the leadership in price setting in the Asian log trade now exerted by China, a leadership dominated by demand for low prices. Many analysts have pointed to the flow of illegal logs to China as an element in depressing prices. Agreements aimed at stemming the flow of illegal logs, signed between Indonesia and the Governments of China and Malaysia, appear to be having an impact with exporters hoping for a positive influence on prices.

GRAPH 11.2.1

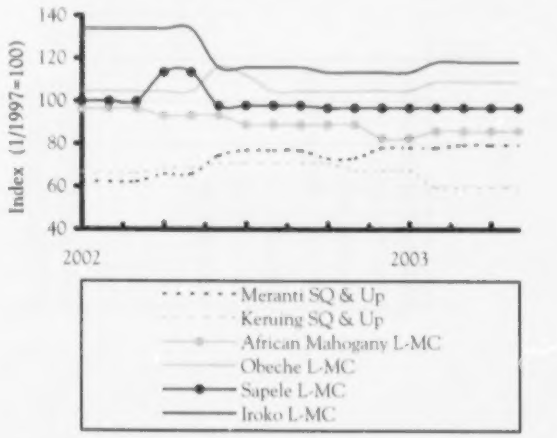
Major tropical log exporters, 2000-2002



Note: PNG=Papua New Guinea.
Source: ITTO, 2003.

GRAPH 11.2.2

Tropical log price trends, 2002-2003



Source: ITTO, 2003.

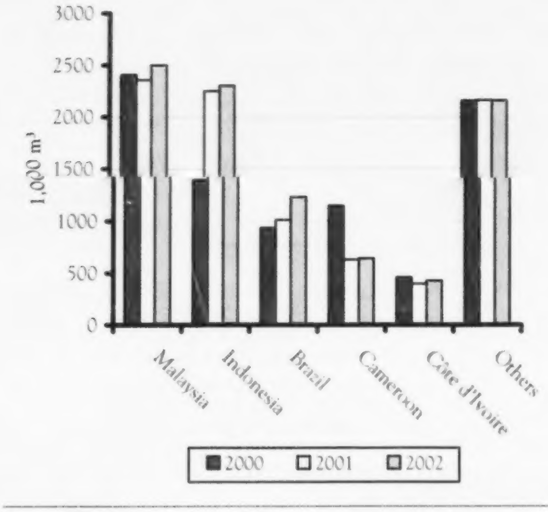
Recent conflicts in some African countries have also had a severe impact on the tropical log trade and prices. Exports from Central African Republic and the Republic of Congo have fallen and buyers have turned to Gabon and Cameroon for supplies of good quality sapele and moabi. The problems of trading in African logs were compounded in mid – 2003 by United Nations Security Council resolution 1478 of 6 May 2003, which prohibited imports of wood products from Liberia. The ban on imports went into effect in July 2003 and will run for 10 months. The resolution notes that revenue from timber exports has increasingly been used for illegal arms transactions since restrictions were placed on the diamond trade with Liberia. The Security Council identified 37 countries that have been buying timber from Liberia, with the major markets being China and France.

11.2.2 Sawnwood

ITTO producers exported a total of almost 8 million m^3 of tropical sawnwood in 2001, up 6.1% from 2000, with the increase mainly due to higher Indonesian exports as reported by trading partners. Malaysia continues to dominate the trade in tropical sawnwood, with the 2.4 million m^3 exported in 2001 constituting 29% of total ITTO producer member exports (graph 11.2.3). Sawnwood exports for all of the top five ITTO exporters increased in 2002. In addition to the countries in the graph, Thailand, China and Ghana all exported over 200,000 m^3 of tropical sawnwood in 2001 and 2002. China's exports (reported as 313,000 m^3 in 2001) have exploded from almost nothing in the late 1990s and need to be further verified.

GRAPH 11.2.3

Major tropical sawnwood exporters, 2000-2002



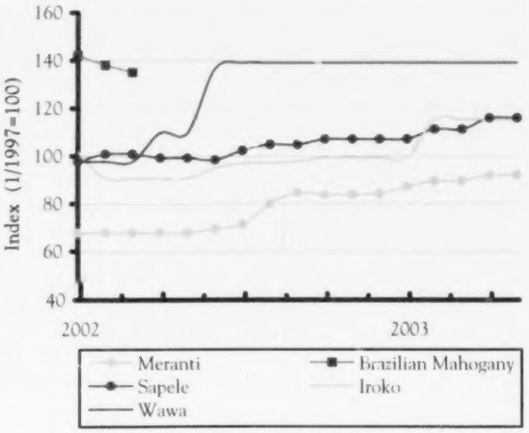
Source: ITTO, 2003.

Trends in FOB prices for some tropical sawnwood mirror to a large extent the pattern observed for tropical log prices. The improvements in price levels seen in the aftermath of the Asian financial crisis were not sustained and a hint of strengthening prices towards the end of 2002 and the early part of 2003 could not be maintained.

The Government of Brazil published a decree in February 2003 suspending mahogany harvesting and creating a Mahogany Special Commission to attempt to ensure this species was sustainably managed, hence the gap for recent Brazilian mahogany sawnwood prices (graph 11.2.4). Bigleaf mahogany (*Swietenia macrophylla)* was recently placed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The Brazilian decree proposed tax incentives for the forestry sector to promote sustainable development in the Amazon region. The mahogany sector in Brazil generated 500,000 jobs and from 1971 to 2001 earned $3.9 billion from foreign markets. The temporary ban on harvesting was aimed at securing the future of this vital sector of the Amazon economy. These measures, coupled with the seizure of several shipments of Brazilian mahogany by United States Customs due to the inability of the Government of Brazil to confirm if the timber had been legally sourced (as per CITES requirements), disrupted mahogany markets and eroded price levels for all exporting countries. Peru's mahogany exporters in particular witnessed a severe drop in demand and prices due to the market uncertainty.

GRAPH 11.2.4

Tropical sawnwood price trends, 2002-2003



Note: Mahogany prices stopped when Brazil banned harvesting.
Source: ITTO, 2003.

11.2.3 Veneer

Total ITTO producer member veneer exports decreased by nearly 22% to 1.1 million m^3 in 2001, and slumped a further 11% in 2002 to 1 million m^3. Despite recent sharp drops, Malaysia continues to be ITTO's dominant veneer exporter, with exports of 656,000 m^3 in 2001 accounting for 57% of total ITTO producer member exports (graph 11.2.5).

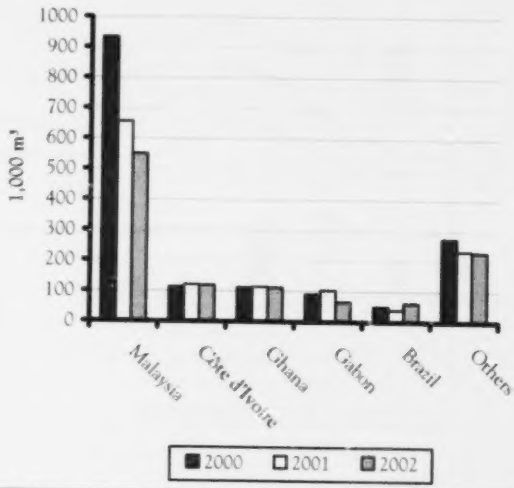
11.2.4 Plywood

In 2001, ITTO producer exports of tropical plywood declined 8.3% to 11 million m^3, dropping further to 10.7 million m^3 in 2002. Indonesia continues to dominate the trade in tropical plywood with the 6.3 million m^3 exported in 2001 constituting 57% of total ITTO producer member exports, although this is down from a high of 84% in 1992. Indonesia's exports were estimated to have increased slightly in 2002 to 6.5 million m^3 (graph 11.2.6).

2002 was not a particularly good year for tropical plywood exporters and early 2003 brought new hurdles to market access. In two of the major markets for tropical plywood, Japan and the EU, new and stricter quality and safety standards for imported and domestically produced plywood have been introduced. In some cases, mills will have to modify production processes, as well as pay for external, third-party checking, which will increase the cost of producing plywood. Since market prices for commodity plywood are still extremely weak, having never recovered to the levels seen prior to the 1997-1998 Asian financial crises, the prospects for tropical hardwood plywood are not bright. In fact, at the end of May 2003 prices for Asian export plywood were still at only 45-55% of the pre-crisis levels (graph 11.2.7).

GRAPH 11.2.5

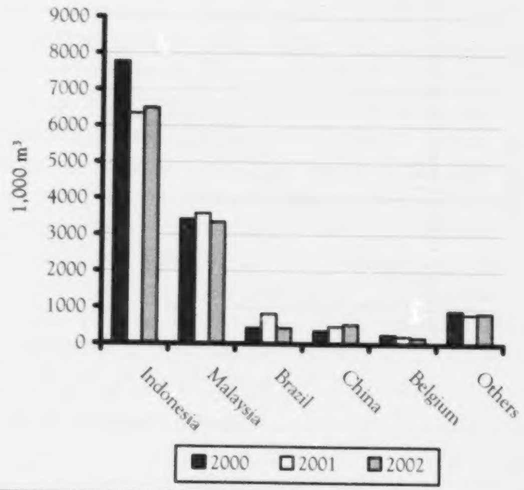
Major tropical veneer exporters, 2000-2002



Source: ITTO, 2003.

GRAPH 11.2.6

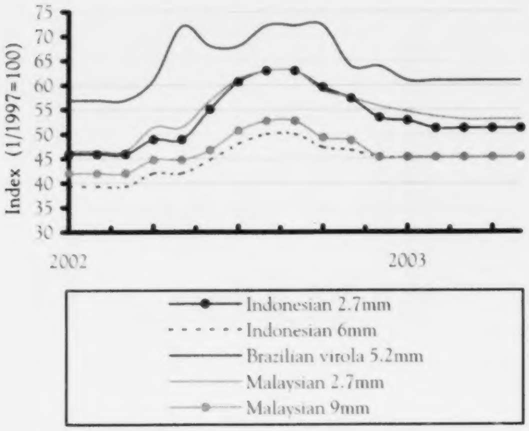
Major tropical plywood exporters, 2000-2002



Source: ITTO, 2003.

GRAPH 11.2.7

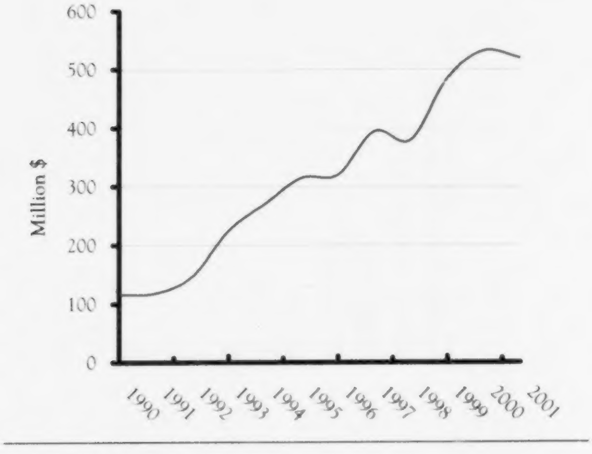
Tropical plywood price trends, 2002-2003



Note: FOB prices.
Source: ITTO, 2003.

GRAPH 11.2.8

Reconstituted panel exports by ITTO producers, 1990-2001



Source: ITTO, 2003.

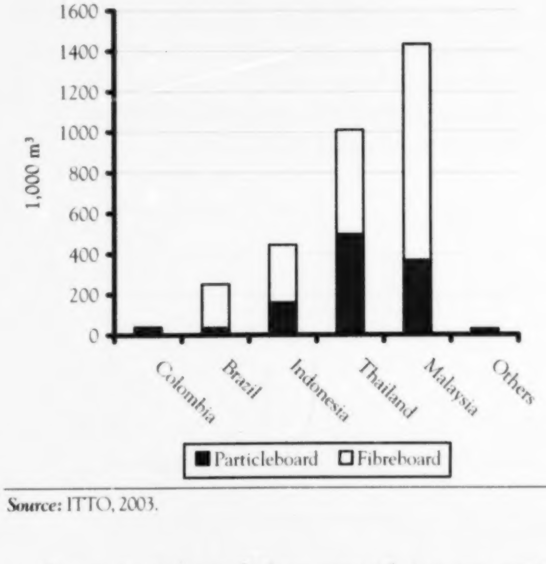
A recent study (ITTO, 2003c) found that, despite substantial downsizing, significant overcapacity continues to exist in the tropical plywood sector, with estimates of capacity utilization during 2000 at around 50% in the Asian plywood sector as a whole, 58% in Africa, and a slightly better 65% in South America. The problem is most pronounced in Indonesia, where log shortages are the main issue rather than demand weakness. Quite a few plywood mills, especially in Indonesia, have severe cash flow constraints – their marketing and processing operations are now driven by cash flow needs rather than profit optimization and international markets are taking advantage of this by capping moves to improve prices.

11.2.5 Reconstituted panels

The rapid growth of ITTO producer country exports of reconstituted panels (particleboard and fibreboard) over the 1990-2001 period has been driven by an impressive expansion in exports by Asia, particularly Malaysia (up more than twenty-fold since 1990) Thailand (up over 400%) and Indonesia (up 219%), the three largest ITTO producer exporters (graphs 11.2.8 and 11.2.9). Asia accounted for 82% of ITTO producer exports of reconstituted panels in 2000. By comparison, exports by Brazil (mainly of fibreboard) declined by 12% in the same period due to increased domestic demand. Brazil was, until the mid-1990s, the largest ITTO producer exporter of reconstituted panels. However, the value of reconstituted panel exports from tropical countries, while growing strongly, is still only about 7% of the value of exports of traditional primary tropical timber products from these countries, worth $7.4 billion in 2001.

GRAPH 11.2.9

Major tropical reconstituted panel exporters in 2001

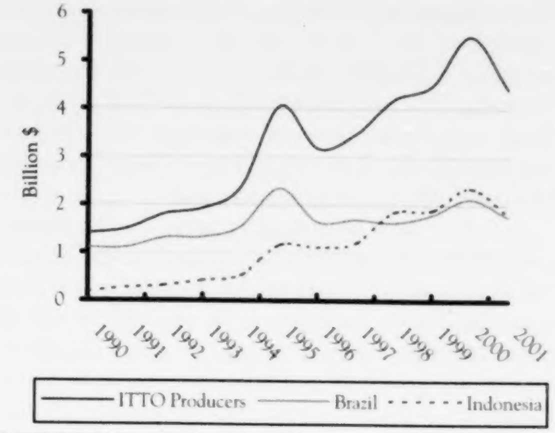


Source: ITTO, 2003.

Reconstituted panels from tropical Asia are exported mainly to north Asian countries (China, Republic of Korea and Japan), whereas Latin American exports go mainly to the United States, with smaller amounts to Europe and neighbouring countries.

GRAPH 11.2.10

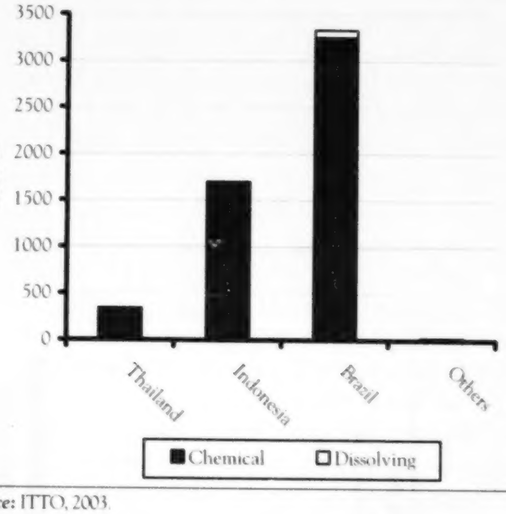
Pulp and paper exports by ITTO producers, 1990-2001



Source: ITTO, 2003.

GRAPH 11.2.11

Major tropical woodpulp exporters in 2001



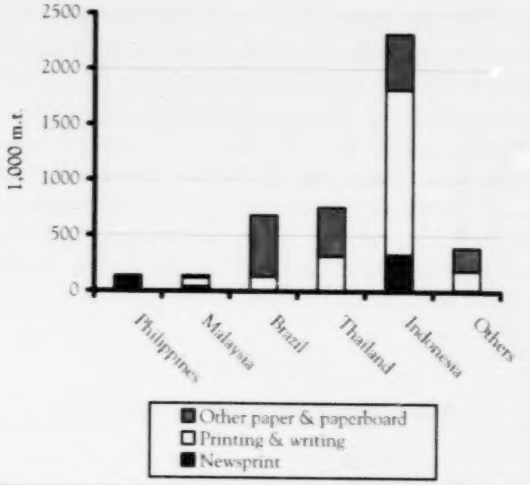
Source: ITTO, 2003.

11.2.6 Woodpulp and paper products

There are only three significant tropical pulp exporters (Brazil, Indonesia and Thailand), all of whom export solely or primarily sulphate-bleached chemical pulp. Woodpulp exports by ITTO producers totalled 5.4 million tons in 2001, led by Brazil, where exports grew over 10% to 3.3 million tons. Brazil's exports include substantial quantities of pulp manufactured from pine in the southern, non-tropical part of the country.

GRAPH 11.2.12

Major tropical paper exporters in 2001



Source: ITTO, 2003.

Export earnings for pulp and paper in ITTO producing countries have been increasing since 1990 (graph 11.2.10). Pulp and paper exports from ITTO producers have risen by 293% over this period, led by increases in exports from Indonesia (up over 12 times) and Brazil (up 94%) (graph 11.2.11 and graph 11.2.12). Indonesia's pulp and paper exports have led ITTO producer exports upward in the last decade and now account for 41% of total producer pulp and paper exports. Indonesia overtook Brazil in 1998 as the largest ITTO producer exporter of these products. In Brazil (which now accounts for about 40% of the producer country total), pulp and paper exports grew steadily until 1995 before decreasing sharply as production was diverted to meet the growing needs of the huge domestic market. Exports recovered in 1999-2000 due to a devaluation of the *real*. Exports by all producers declined in value terms in 2001 (despite increases in quantity in many cases) as prices fell owing to the slowing global economy.

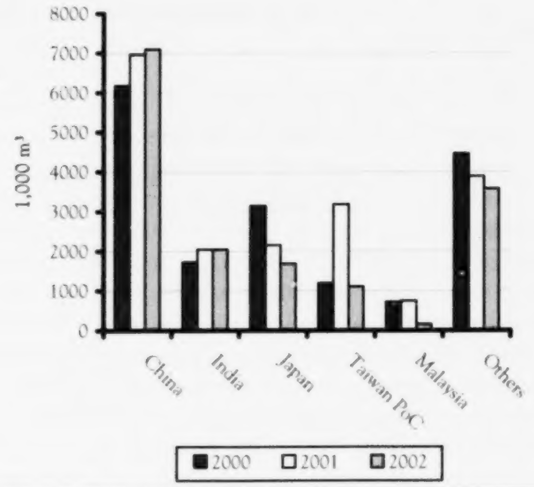
11.3 Import trends

11.3.1 Industrial roundwood (logs)

Total imports of tropical hardwood logs by ITTO members rose nearly 9% to 18.9 million m^3 in 2001. China, the world's largest importer of tropical logs, imported over 6.9 million m^3 in 2001 (up 12% from 2000) but imports slowed in 2002, rising 2% to 7.1 million m^3 (graph 11.3.1). China's growing economy, the ban on domestic harvesting and the zero tariffs on log imports continue to be the main driving factors behind its growing imports. China's tropical log imports, which account for over 45% of total ITTO imports, have soared more than five-fold in the last five years, with Indonesia, Gabon, Malaysia, Myanmar and Papua New Guinea being the main sources. China's import of non-tropical logs has expanded even more rapidly, with Russia providing the bulk of around 17 million m^3 imported in 2002, a 70% leap from the figure for 2001. The continued rapid growth of (mostly coniferous) non-tropical log imports, coupled with the slowing of tropical imports, shows that China may be nearing the limit of what tropical countries can provide. China's booming log and sawnwood imports have given rise to a thriving furniture and plywood export sector, which is having profound impacts on tropical exporters of these products.

GRAPH 11.3.1

Major tropical log importers, 2000-2002



Source: ITTO, 2003.

Several ITTO producing countries have become major importers of tropical logs, indicating the extent of wood shortages and increased timber demand in their domestic forest sectors. India (2 million m^3) and Malaysia (746,000 m^3) were the main importers in 2001 and, along with Thailand (433,000 m^3) and the Philippines (259,000 m^3), account for the majority of ITTO producer country imports of tropical logs.

11.3.2 Sawnwood

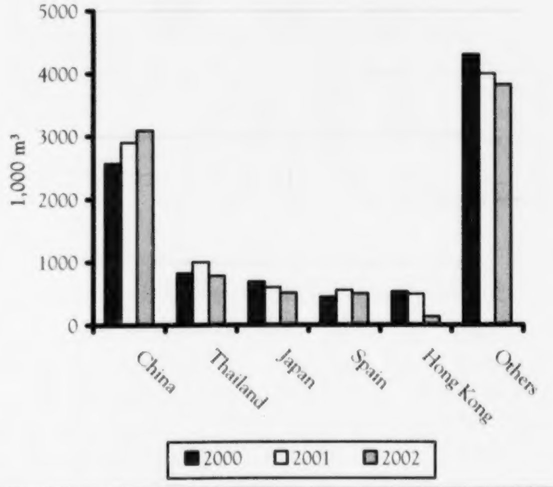
Total ITTO imports of tropical sawnwood increased 2% to almost 9.5 million m^3 in 2001 but fell by 7.2% to 8.9 million m^3 in 2002. There is a clear contrast between trends for Asia and for Europe. With 2001 imports of nearly 3 million m^3, China is by far the top ITTO tropical sawnwood importer (graph 11.3.2). China's imports surged 13% in 2001 and a further 7% in 2002. China's tropical sawnwood imports are mainly from Indonesia (40%) and Malaysia (14%). The combined imports of China, Hong Kong Special Administrative Region and Taiwan Province of China accounted for almost half of ITTO consumer imports in 2001. Thailand imported 1 million m^3 (up 22%) in 2001 as its large furniture and secondary processing industries continued to recover. However, Thai imports fell 22% to 785,000 m^3 in 2002 owing to a slowing domestic economy. Both Thailand's and Japan's tropical sawnwood imports are primarily from Malaysia (64% and 45%, respectively).

Total tropical sawnwood imports by EU countries declined by 1.5% in 2001 to 2.7 million m^3, and by almost 8% in 2002 to 2.5 million m^3 due to declines in Belgium, Denmark, France, Germany, Italy, the Netherlands and Spain. Malaysia and Indonesia are the main sources for EU imports, accounting for over half of the total. Côte d'Ivoire, Cameroon, Brazil and Ghana supplied virtually all of the remainder of EU imports. Spain is the largest importer of tropical sawnwood in the EU, absorbing 553,000 m^3 in 2001 (up 25% from 2000) and 500,000 m^3 in 2002. Spain's imports are primarily from Africa (Cameroon and Côte d'Ivoire), and Brazil. France (396,000 m^3), the Netherlands (388,000 m^3) and the United Kingdom (348,000 m^3) were other major EU tropical sawnwood importers in 2001.

The tropical sawnwood market is the most diversified geographically of all primary tropical timber products, with the five largest importers accounting for fewer than 60% of total ITTO imports in 2001; this is illustrated by the size of the bar for "other importers" (graph 11.3.2).

GRAPH 11.3.2

Major tropical sawnwood importers, 2000-2002



Source: ITTO, 2003.

11.3.3 Veneer

Total ITTO imports of tropical veneer dropped nearly 15% to 1.2 million m³ in 2001, falling further to 1.1 million m³ in 2002. China continued to substitute domestically produced veneer for imports, with tropical veneer shipments dropping by 51% to just under 300,000 m³ in 2001 and a further 48% to 150,000 m³ in 2002. Despite this decline, China remained the top ITTO importer in 2001. With imports halving again to 150,000 m³ in 2002, China relinquished the top spot to the Republic of Korea, where imports surged 39% in 2001 to 203,000 m³ and remained stable in 2002. Four out of the five top veneer importers are Asian countries (graph 11.3.3). Imports by Asian countries are primarily sourced from Malaysia, whereas the majority of European imports are from African producers (mainly Côte d'Ivoire, but increasingly also from Gabon and Ghana). The EU absorbed 227,000 m³ and 234,000 m³ of tropical veneer in 2001 and 2002, around one fifth of total ITTO imports in both years. Japan imported 48,000 m³ of tropical veneer in 2001, 6% less than in 2000. Japan's tropical veneer imports decreased a dramatic 80% to 9,000 m³ in 2002.

11.3.4 Plywood

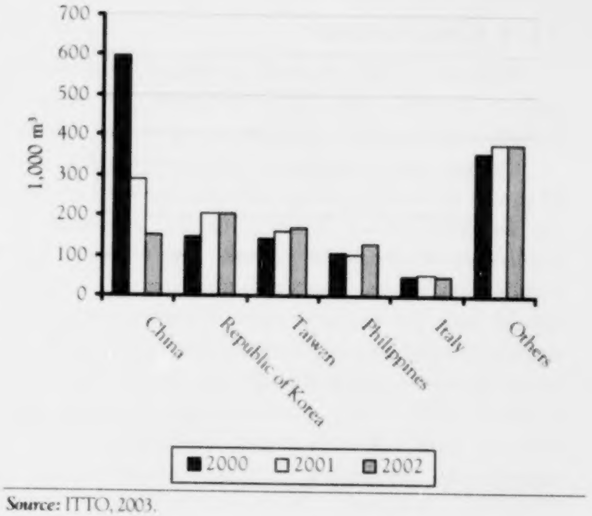
Total ITTO imports of tropical plywood were stable at 10.3 million m³ in 2001 but decreased by 5% in 2002 to 9.8 million m³. The majority of all tropical plywood imports are sourced from Indonesia and Malaysia (59% and 41% respectively in 2001 for the top importer, Japan). Japan continues to replace domestic hardwood plywood production with softwoods, imported plywood (tropical and non-tropical) and substitutes such as OSB and MDF. Its tropical plywood imports decreased by 5% in 2002, to 4.3 million m³, due to its continuing flat construction sector (graph 11.3.4). The general trend towards increasing plywood imports by Japan is partially due to its difficulty in obtaining tropical logs for domestic production in the face of competition from China. Low prices also continued to make imported plywood more attractive than domestic production in 2001-2002. Japan is now importing small but growing quantities of low-priced tropical plywood from China.

11.3.5 Freight rates

The sudden increase in oil prices in early 2003 had serious repercussions for the tropical timber trade. With container freight rates rising with every increase in oil prices, Japanese and European importers suffered significant erosion of profit margins. For Japan the base rate for 40-foot containers went up by $200-$300 from March 2003 and only by June had it returned to more acceptable levels. This represented, for example, an increased cost of about $2.50 per cubic metre of sawnwood for Japanese importers.

GRAPH 11.3.3

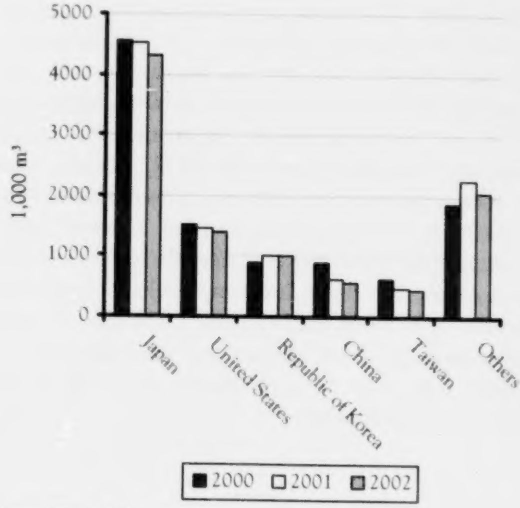
Major tropical veneer importers, 2000-2002



Source: ITTO, 2003.

GRAPH 11.3.4

Major tropical plywood importers, 2000-2002



Source: ITTO, 2003.

At the same time, Netherlands importers saw Asian shippers abandon firm freight rates, which had been around $1,650 per 40-foot container to Rotterdam. In April 2003, freight charges for 40-foot containers increased by $200-$300, sending freight rates from Malaysia to the Netherlands close to $2,000 per container. These problems, along with considerable uncertainty in currency markets in early 2003, added to the problems of tropical timber importers and exporters alike. At mid-year many importers were taking a "wait and see" attitude before committing to purchases, fearing continuing wide currency swings would wipe out their already thin margins.

11.4 Conclusion

Attempts to halt the trade in illegally produced logs and to promote value-added processing of timber in tropical countries will continue to reduce the volume of tropical industrial roundwood and sawnwood in trade. One way to ascertain if logs and other products exported are sustainably (and therefore legally) produced is to implement a chain of custody log tracking and/or certification system. Timber certification thus remains a topical issue for many tropical countries, with several tropical forestry operations continuing to seek some form of certification, either through the Forest Stewardship Council (FSC) or other avenues (e.g. ISO 14000, national standards authorities). Tropical countries are increasingly developing national schemes, led by Malaysia's National Timber Certification Council (NTCC) and Indonesia's ITTO-supported Eco-labelling Institute (LEI), both of which continued steps to market certified tropical forest products with their own labels in 2002 and to seek common ground with the FSC scheme and others. Several other tropical countries are seeking support from ITTO and others for the development of national certification schemes. The proliferation of national schemes has led to numerous calls for a framework for mutual recognition between schemes and ITTO has been active in attempting to facilitate agreement on such a framework. ITTO has also carried out substantial work to promote phased approaches to certification, through which tropical countries can be recognized for their progress towards sustainable forest management, thereby maintaining market access for their products. It is likely that increasing volumes of tropical timber products (both primary and secondary) in world markets will soon bear certificates attesting to their legality and sustainability.

11.5 References

ITTO. 2003a. *Annual Review and Assessment of the World Timber Situation – 2002.*

ITTO. 2003b. Market Information Service (biweekly).

ITTO. 2003c. Draft Report of PPD 34/01 (M) - Study to Identify Measures to Bring Increased Transparency to Tropical Hardwood Plywood Trade and Analyse the Causes of Market Fluctuations and Price Instability.

ITTO. 2003d. Potential Role of Phased Approaches to Certification in Tropical Timber Producer Countries as a Tool to Promote Sustainable Forest Management.

Annexes

1. Components of wood products groups

1. Roundwood flow chart
2. Wood-based panels flow chart
3. Woodpulp flow chart
4. Paper and paperboard flow chart

2. Forest products terminology

1. General terms and transactions
2. Primary products
3. Secondary processed wood products
4. Engineered wood products

3. Countries in the UNECE region and its subregions

4. Sources of information used in the *Forest Products Annual Market Analysis*

5. Special chapters in former *Forest Products Annual Market Reviews*

6. Some facts about the Timber Committee

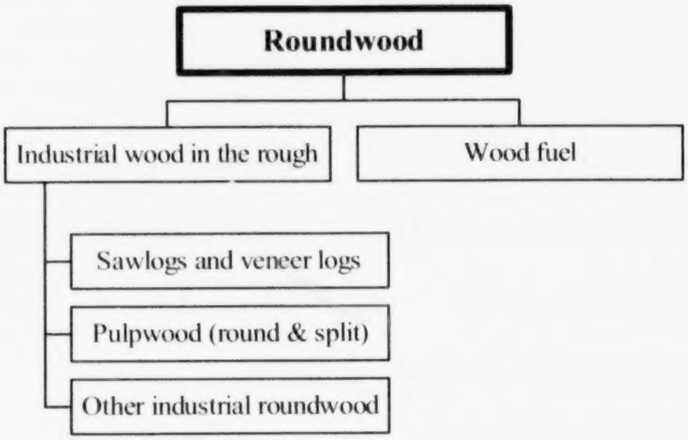
7. UNECE/FAO publications

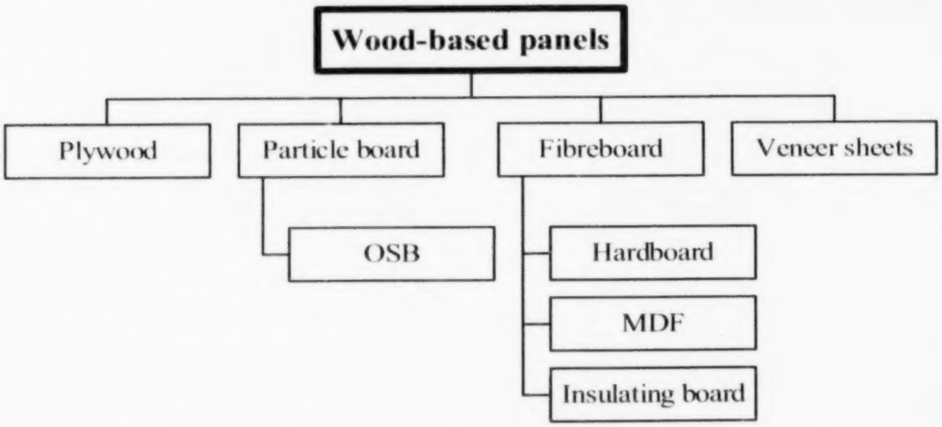
8. Reader survey

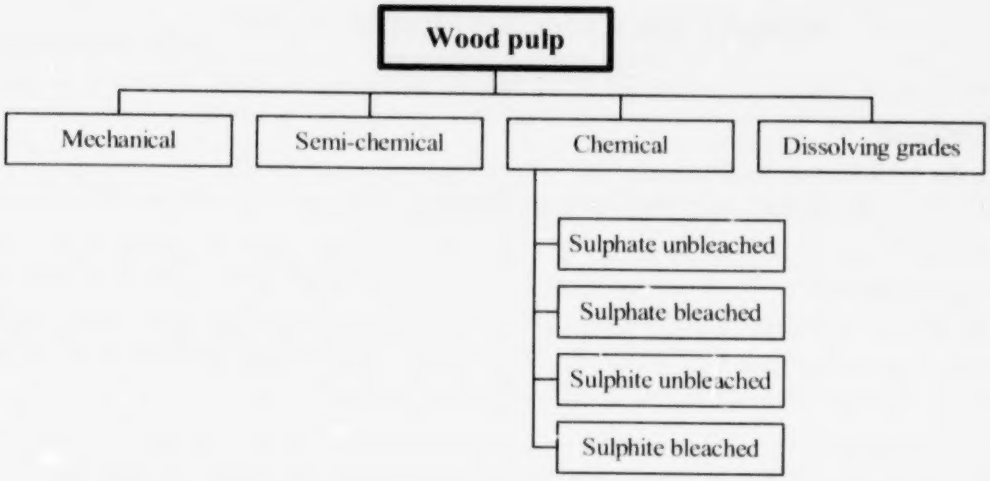
Components of wood products groups

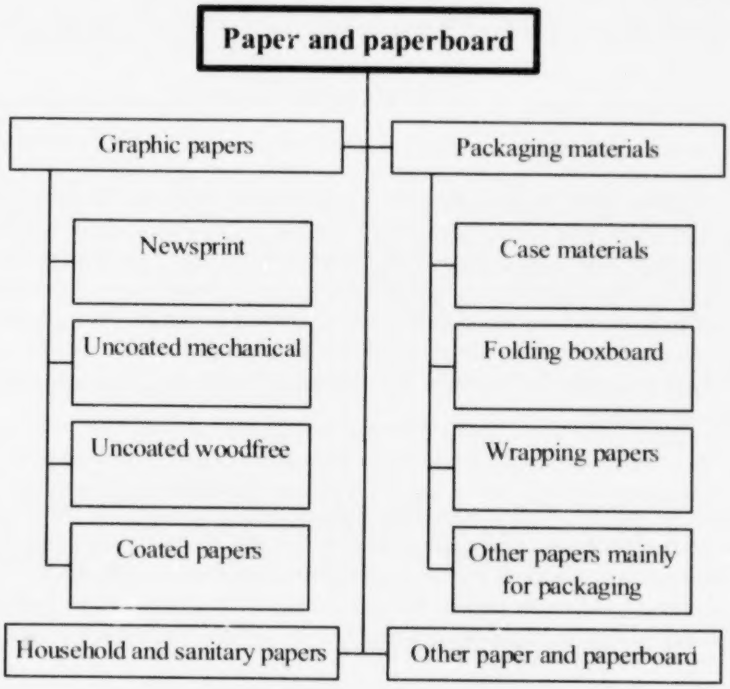
(Based on Joint Forest Sector Questionnaire nomenclature, 2001)

The important breakdowns of the major groups of primary forest products are diagrammed below. In addition, many sub-items are further divided into softwood or hardwood. These are all the roundwood products, sawnwood, veneer sheets and plywood. Items that do not fit into listed aggregates are not shown. These are wood charcoal, chips and particles, wood residues, sawnwood, other pulp and recovered paper.


Roundwood
Industrial wood in the rough
Wood fuel
Sawlogs and veneer logs
Pulpwood (round & split)
Other industrial roundwood


Wood-based panels
Plywood
Particle board
Fibreboard
Veneer sheets
OSB
Hardboard
MDF
Insulating board


Wood pulp
Mechanical
Semi-chemical
Chemical
Dissolving grades
Sulphate unbleached
Sulphate bleached
Sulphite unbleached
Sulphite bleached


Paper and paperboard
Graphic papers
Packaging materials
Newsprint
Uncoated mechanical
Uncoated woodfree
Coated papers
Case materials
Folding boxboard
Wrapping papers
Other papers mainly for packaging
Household and sanitary papers
Other paper and paperboard

FOREST PRODUCTS TERMINOLOGY[74]
GENERAL TERMS

Coniferous (softwood)

All woods derived from trees classified botanically as Gymnospermae, e.g. *Abies* spp., *Araucaria* spp., *Cedrus* spp., *Chamaecyparis* spp., *Cupressus* spp., *Larix* spp., *Picea* spp., *Pinus* spp., *Thuja* spp., *Tsuga* spp., etc. These are generally referred to as softwoods.

Non-coniferous (hardwood)

All woods derived from trees classified botanically as Angiospermae, e.g. *Acer* spp., *Dipterocarpus* spp., *Entandroprhagma* spp., *Eucalyptus* spp., *Fagus* spp., *Populus* spp., *Quercus* spp., *Shorea* spp., *Swietonia* spp., *Tectona* spp., etc. These are generally referred to as broadleaves or hardwoods.

Tropical

Tropical timber is defined in the International Tropical Timber Agreement (1994) as follows "Non-coniferous tropical wood for industrial uses, which grows or is produced in the countries situated between the Tropic of Cancer and the Tropic of Capricorn. The term covers logs, sawnwood, veneer sheets and plywood. Plywood which includes in some measure conifers of tropical origin shall also be covered by the definition." Tropical sawnwood, veneer sheets and plywood shall also include products produced in non-tropical countries from imported tropical roundwood.

TRANSACTIONS

Removals

The volume of all trees, living or dead, that are felled and removed from the forest, other wooded land or other felling sites. It includes natural losses that are recovered (i.e. harvested), removals during the year of wood felled during an earlier period removals of non-stem wood such as stumps and branches (where these are harvested) and removal of trees killed or damaged by natural causes (i.e. natural losses), e.g. fire, windblown, insects and diseases. It excludes bark and other non-woody biomass and any wood that is not removed, e.g. stumps, branches and tree tops (where these are not harvested) and felling residues (harvesting waste). It is reported in cubic metres solid volume underbark (i.e. excluding bark). Where it is measured overbark (i.e. including bark), the volume has to be adjusted downwards to convert to an underbark estimate.

Production

The solid volume or weight of all production of the products specified below. It includes the production of products that may immediately be consumed in the production of another product (e.g. woodpulp, which may immediately be converted into paper as part of a continuous process). It excludes the production of veneer sheets that are used for plywood production within the same country. It is reported in cubic metres of solid volume in the case of roundwood, sawnwood and wood based panels and metric tonnes in the case of charcoal, pulp and paper products.

Imports (volume, value)

Products imported for domestic consumption or processing shipped into a country. It includes imports for re-export. It excludes "In-transit" shipments. It is reported in cubic metres of solid volume or metric tonnes and values normally include cost, insurance and freight (i.e. CIF).

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[74] From ECE/FAO/EUROSTAT/ITTO Joint Forest Sector Questionnaire and APA-The Engineered Wood Association.

Exports (volume, value)

Products of domestic origin or manufacture shipped out of the country. It includes re-exports. It excludes "in-transit" shipments. It is reported in cubic metres of solid volume or metric tonnes and values are normally recorded as free-on-board (i.e. FOB).

PRODUCTS

The names of individual forest products and product aggregates are listed below in the order in which they occur in the publication *Forest Products Statistics*. Separate definitions are not provided for coniferous and non-coniferous components where the general definition given above applies. Unless indicated otherwise, each forest product category includes both coniferous and non-coniferous components.

Roundwood

All roundwood felled or otherwise harvested and removed. It comprises all wood obtained from removals, i.e. the quantities removed from forests and from trees outside the forest, including wood recovered from natural, felling and logging losses during the period, calendar year or forest year. It includes all wood removed with or without bark, including wood removed in its round form, or split, roughly squared or in other form (e.g. branches, roots, stumps and burls [where these are harvested]) and wood that is roughly shaped or pointed. It is an aggregate comprising wood fuel, including wood for charcoal and industrial roundwood (wood in the rough). It is reported in cubic metres solid volume underbark (i.e. excluding bark).

Wood fuel (including wood for charcoal)

Roundwood that will be used as fuel for purposes such as cooking, heating or power production. It includes wood harvested from main stems, branches and other parts of trees (where these are harvested for fuel) and wood that will be used for charcoal production (e.g. in pit kilns and portable ovens). The volume of roundwood used in charcoal production is estimated by using a factor of 6.0 to convert from the weight (m.t.) of charcoal produced to the solid volume (m^3) of roundwood used in production. It also includes wood chips to be used for fuel that are made directly (i.e. in the forest) from roundwood. It excludes wood charcoal. It is reported in cubic metres solid volume underbark (i.e. excluding bark).

Industrial roundwood (wood in the rough)

All roundwood except wood fuel. It is an aggregate comprising sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood. It is reported in cubic metres solid volume underbark (i.e. excluding bark). The customs classification systems used by most countries do not allow the division of industrial roundwood *trade* statistics into the different end-use categories that have long been recognized in *production* statistics (i.e. saw and veneer logs, pulpwood and other industrial roundwood. It excludes telephone poles.

Sawlogs and veneer logs

Roundwood that will be sawn (or chipped) lengthways for the manufacture of sawnwood or railway sleepers (ties) or used for the production of veneer (mainly by peeling or slicing). It includes roundwood (whether or not it is roughly squared) that will be used for these purposes: shingle bolts and stave bolts; match billets and other special types of roundwood (e.g. burls and roots, etc.) used for veneer production. It is reported in cubic metres solid volume underbark (i.e. excluding bark).

Pulpwood, round and split

Roundwood that will be used for the production of pulp, particleboard or fibreboard. It includes: roundwood (with or without bark) that will be used for these purposes in its round form or as splitwood or wood chips made directly (i.e. in the forest) from roundwood. It is reported in cubic metres solid volume underbark (i.e. excluding bark).

Other industrial roundwood

Industrial roundwood (wood in the rough) other than sawlogs, veneer logs or pulpwood. It includes roundwood that will be used for poles, piling, posts, fencing, pitprops tanning, distillation and match blocks, etc. It is reported in cubic metres solid volume underbark (i.e. excluding bark).

Wood charcoal

Wood carbonised by partial combustion or the application of heat from external sources. It includes charcoal used as a fuel or for other uses, e.g. as a reduction agent in metallurgy or as an absorption or filtration medium. It is reported in metric tonnes.

Chips and particles

Wood that has been deliberately reduced to small pieces during the manufacture of other wood products and is suitable for pulping, for particle board and fibreboard production, for use as a fuel, or for other purposes. It excludes wood chips made directly (i.e. in the forest) from roundwood (i.e. already counted as pulpwood, round and split). It is reported in cubic metres solid volume excluding bark.

Wood residues

The volume of roundwood that is left over after the production of forest products in the forest processing industry (i.e. forest processing residues) and that has not been reduced to chips or particles. It includes sawmill rejects, slabs, edgings and trimmings, veneer log cores, veneer rejects, sawdust, residues from carpentry and joinery production, etc. It excludes wood chips made either directly (i.e. in the forest) from roundwood or made from residues (i.e. already counted as pulpwood, round and split or wood chips and particles). It is reported in cubic metres solid volume excluding bark.

Sawnwood

Wood that has been produced from both domestic and imported roundwood, either by sawing lengthways or by a profile-chipping process and that, with a few exceptions, exceeds 5 mm in thickness. It includes planks, beams, joists, boards, rafters, scantlings, laths, boxboards and "lumber", etc., in the following forms: unplaned, planed, finger-jointed, etc. It excludes sleepers, wooden flooring, mouldings (sawnwood continuously shaped along any of its edges or faces, like tongued, grooved, rebated, V-jointed, beaded, moulded, rounded or the like) and sawnwood produced by resawing previously sawn pieces. It is reported in cubic metres solid volume.

Wood-based panels

This product category is an aggregate comprising veneer sheets, plywood, particle board, and fibreboard. It is reported in cubic metres solid volume.

Veneer sheets

Thin sheets of wood of uniform thickness, rotary cut (i.e. peeled), sliced or sawn. It includes wood used for the manufacture of laminated construction material, furniture, veneer containers, etc. It excludes wood used for plywood production within the same country. It is reported in cubic metres solid volume.

Plywood

A panel consisting of an assembly of veneer sheets bonded together with the direction of the grain in alternate plies generally at right angles. The veneer sheets are usually placed symmetrically on both sides of a central ply or core that may itself be made from a veneer sheet or another material. It includes *veneer plywood* (plywood manufactured by bonding together more than two veneer sheets, where the grain of alternate veneer sheets is crossed, generally at right angles); *core plywood* or *blockboard* (plywood with a solid core (i.e. the central layer, generally thicker than the other plies) that consists of narrow boards, blocks or strips of wood placed side by side, which may or may not be glued together); *cellular board* (plywood with a core of cellular construction); and *composite plywood* (plywood with the core or certain layers made of material other than solid wood or veneers). It excludes laminated construction materials (e.g. glulam), where the grain of the veneer sheets generally runs in the same direction. It is reported in cubic metres solid volume. Non-coniferous (tropical) plywood is defined as having at least one face sheet of non-coniferous (tropical) wood.

Particle board (including oriented strandboard [OSB])

A panel manufactured from small pieces of wood or other ligno-cellulosic materials (e.g. chips, flakes, splinters, strands, shreds, shives, etc.) bonded together by the use of an organic binder together with one or more of the following agents: heat, pressure, humidity, a catalyst, etc. The particle board category is an aggregate category. It includes particle board, oriented strandboard (OSB) and flaxboard. It excludes wood wool and other particle boards bonded together with inorganic binders. It is reported in cubic metres solid volume.

Oriented strandboard (OSB)

A structural board in which layers of narrow wafers are layered alternately at right angles in order to give the board greater elastomechanical properties. The wafers, which resemble small pieces of veneer, are coated with e.g. waterproof phenolic resin glue, interleaved together in mats and then bonded together under heat and pressure. The resulting product is a solid, uniform building panel having high strength and water resistance. It includes waferboard and oriented strandboard (OSB). It is reported in cubic metres solid volume.

Fibreboard

A panel manufactured from fibres of wood or other ligno-cellulosic materials with the primary bond deriving from the felting of the fibres and their inherent adhesive properties (although bonding materials and/or additives may be added in the manufacturing process). It includes fibreboard panels that are flat-pressed and moulded fibreboard products. It is an aggregate comprising hardboard, medium density fibreboard (MDF), and insulating board. It is reported in cubic metres solid volume.

Hardboard

Fibreboard of a density exceeding 0.8 g/cm^3. It excludes similar products made from pieces of wood, wood flour or other ligno-cellulosic material where additional binders are required to make the panel, and panels made of gypsum or other mineral material. It is reported in cubic metres solid volume.

Medium density fibreboard (MDF)

Fibreboard of a density exceeding 0.5 g/cm^3 but not exceeding 0.8 g/cm^3. It is reported in cubic metres solid volume.

Insulating board

Fibreboard of a density not exceeding 0.5 g/cm^3. It is reported in cubic metres solid volume.

Woodpulp

Fibrous material prepared from pulpwood, wood chips, particles or residues by mechanical and/or chemical process for further manufacture into paper, paperboard, fibreboard or other cellulose products. It is an aggregate comprising mechanical woodpulp; semi-chemical woodpulp; chemical woodpulp; and dissolving woodpulp. It is reported in metric tonnes air-dry weight (i.e. with a 10% moisture content).

Mechanical woodpulp

Woodpulp obtained by grinding or milling pulpwood or residues into fibres, or through refining chips or particles. Also called ground woodpulp and refiner pulp, it may be bleached or unbleached. It includes chemi-mechanical and thermo-mechanical pulp. It excludes exploded and defibrillated pulp. It is reported in metric tonnes air-dry weight (i.e. with 10% moisture content).

Semi-chemical woodpulp

Woodpulp obtained by subjecting pulpwood, wood chips, particles or residues to a series of mechanical and chemical treatments, none of which alone is sufficient to make the fibres separate readily. It may be bleached or unbleached. It includes semi-chemical woodpulp; chemi-ground woodpulp; and chemi-mechanical woodpulp etc. (named in the order and importance of the treatment during the manufacturing process). It is reported in metric tonnes air-dry weight (i.e. with 10% moisture content).

Chemical woodpulp

Woodpulp obtained by subjecting pulpwood, wood chips, particles or residues to a series of chemical treatments. It includes sulphate (kraft) woodpulp; soda woodpulp and sulphite woodpulp. It may be bleached, semi-bleached or unbleached. It excludes dissolving grades of woodpulp. It is reported in metric tonnes air-dry weight (i.e. with 10% moisture content). Component pulps are unbleached sulphite pulp, bleached sulphite pulp, unbleached sulphate pulp, and bleached sulphate pulp.

Sulphite unbleached pulp

Sulphite bleached pulp

Woodpulp obtained by mechanically reducing pulpwood, wood chips, particles or residues to small pieces that are subsequently cooked in a pressure vessel in the presence of a bisulphite cooking liquor. Bisulphites such as ammonium, calcium, magnesium and sodium are commonly used in this process. It excludes dissolving grades of woodpulp. It is reported in metric tonnes air-dry weight (i.e. with a 10% moisture content).

Dissolving grades

Chemical pulp (sulphate, soda or sulphite) made from wood of special quality, with a very high alpha-cellulose content (usually 90 percent and over). This type of pulp is always bleached and is readily adaptable for uses other than papermaking. It is used principally as a source of cellulose in the manufacture of products such as synthetic fibres, cellulose plastic materials, lacquers and explosives. It is reported in metric tonnes air-dry weight (i.e. with 10% moisture content).

Other pulps

Pulp manufactured from waste paper or from fibrous vegetable materials other than wood and used for the manufacture of paper, paperboard and fibreboard. It is an aggregate comprising pulp from fibres other than wood and recovered fibre pulp. It is reported in metric tonnes air-dry weight (i.e. with 10% moisture content).

Pulp from fibres other than wood

Pulp manufactured from fibrous vegetable materials other than wood and used for the manufacture of paper, paperboard and fibreboard. It excludes pulp made from recovered paper. It includes pulps made from straw, bamboo, bagasse, esparto, other reeds or grasses, cotton fibres, flax, hemp, rags, and other textile wastes. It is reported in metric tonnes air-dry weight (i.e. with 10% moisture content).

Recovered fibre pulp

Pulp manufactured from recovered paper or paperboard and used for the manufacture of paper, paperboard and fibreboard. It excludes pulp made from straw, bamboo, bagasse, esparto, other reeds or grasses, cotton fibres, flax, hemp, rags, and other textile wastes. It is reported in metric tonnes air-dry weight (i.e. with 10% moisture content).

Recovered paper

Waste and scraps of paper or paperboard that have been collected for re-use as a raw material for the manufacture of paper and paperboard. It includes paper and paperboard that has been used for its original purpose and residues from paper and paperboard production. It is reported in metric tonnes.

Paper and paperboard

The paper and paperboard category is an aggregate category. It represents the sum of graphic papers, sanitary and household papers, packaging materials and other paper and paperboard. Products in this category are generally manufactured in strips or rolls of a width exceeding 15 cm (36 cm for HS 48.13 and 48.19) or in rectangular sheets with one side exceeding 36 cm and the other exceeding 15 cm in the unfolded state. It excludes manufactured paper products such as boxes, cartons, books and magazines, etc. It is reported in metric tonnes.

Graphic papers

The graphic papers category is an aggregate category. It represents the sum of: newsprint, uncoated mechanical, uncoated woodfree and coated papers. Products in this category are generally manufactured in strips or rolls of a width exceeding 15 cm (36 cm for HS 48.13 and 48.19) or in rectangular sheets with one side exceeding 36 cm and the other exceeding 15 cm in the unfolded state. It excludes manufactured paper products such as books and magazines, etc. It is reported in metric tonnes.

Newsprint

Paper mainly used for printing newspapers. It is made largely from mechanical pulp and/or waste paper, with or without a small amount of filler. Weights usually range from 40 to 52 g/m^2 but can be as high as 65 g/m^2. Newsprint is machine finished or slightly calendered, white or slightly coloured and is used in reels for letterpress, offset or flexo printing. It is reported in metric tonnes.

Uncoated mechanical

Paper suitable for printing or other graphic purposes where less than 90% of the fibre furnish consists of chemical pulp fibres. This grade is also known as groundwood or wood-containing paper and magazine paper, such as heavily filled supercalendered paper for consumer magazines printed by the rotogravure and offset methods. It excludes wallpaper base. It is reported in metric tonnes.

Uncoated woodfree

Paper suitable for printing or other graphic purposes, where at least 90% of the fibre furnish consists of chemical pulp fibres. Uncoated woodfree paper can be made from a variety or furnishes, with variable levels of mineral filler and a range of finishing processes such as sizing, calendering, machine glazing and watermarking. This grade includes most office papers, such as business forms, copier, computer, stationery and book papers. Pigmented and size press "coated" papers (coating less than 5 g per side) are covered by this heading. It excludes wallpaper base. It is reported in metric tonnes.

Coated papers

All paper suitable for printing or other graphic purposes and coated on one or both sides with carbon or minerals such as china clay (kaolin), calcium carbonate, etc. Coating may be by a variety of methods, both on-machine and off-machine, and may be supplemented by supercalendering. It includes raw carbon and self-copy paper in rolls or sheets. It excludes other copying and transfer papers. It is reported in metric tonnes.

Sanitary and household papers

This covers the stock of a wide range of tissue and other hygienic papers for use in households or commercial and industrial premises. Examples are toilet paper and facial tissues, kitchen towels, hand towels and industrial wipes. Some tissue is also used in the manufacture of baby napkins, sanitary towels, etc. The parent reel stock is made from virgin pulp or recovered fibre or mixtures of these. Final products cut to size or in rolls not exceeding 36 cm are excluded here. It is reported in metric tonnes.

Packaging materials

Paper or paperboard mainly used for wrapping and packaging purposes. It excludes: Unbleached kraft paper and paperboard that are not sack kraft paper or kraftliner and weighing more than 150 g/m^2 but less than 225 g/m^2, felt paper and paperboard, tracing papers, not further processed uncoated paper weighing 225 g/m^2 or more. It is reported in metric tonnes.

Case materials

Papers and boards mainly used in the manufacture of corrugated board. They are made from any combination of virgin and recovered fibres and can be bleached, unbleached or mottled. It includes kraftliner, testliner, semi-chemical fluting, and waste-based fluting (Wellenstoff). It is reported in metric tonnes.

Folding boxboard

Often referred to as cartonboard, it may be single- or multi-ply, coated or uncoated. It is made from virgin and/or recovered fibres, and has good folding properties, stiffness and scoring ability. It is mainly used in cartons for consumer products such as frozen food and for liquid containers. It includes paper and paperboard covered or coated with plastics (excluding adhesives); coated Multi-ply not uniformly bleached throughout the mass. It is reported in metric tonnes.

Wrapping papers

Wrappings (up to 150 g/m^2): Papers whose main use is wrapping or packaging made from any combination of virgin or recovered fibres, bleached or unbleached. They may be subject to various finishing and/or marking processes. It includes: sack kraft, other wrapping krafts, sulphite and greaseproof papers as well as coated paper and paperboard not uniformly bleached throughout the mass, except multi-ply. It excludes tracing papers. It is reported in metric tonnes.

Other papers mainly for packaging

This category embraces all papers and boards mainly for packaging purposes other than those listed above. Most are produced from recovered fibres, e.g. greyboards, and go for conversion, which in some cases may be for end-uses other than packaging. It includes composite, not coated, paper and paper board of flat layers stuck together. It is reported in metric tonnes.

Other paper and paperboard N.E.S. (Not Elsewhere Specified)

Other papers and boards for industrial and special purposes. This category includes cigarette papers and stock of filter papers, as well as gypsum liners and special papers for waxing, insulating, roofing, asphalting, and other specific applications or treatments. It excludes all composite, not coated, paper and paper board of flat layers stuck together; coated paper and paperboard not uniformly bleached throughout the mass; paper and paperboard covered or coated with plastics (excluding adhesives). It includes wallpaper base; unbleached kraft paper and paperboard that are not sack kraft paper or kraftliner and weighing more than 150 g/m^2 but less than 225 g/m^2; felt paper and paperboard; tracing papers; not further processed uncoated paper weighing 225 g/m^2 or more, raw copying and transfer papers, in rolls or sheets except carbon or self-copy paper. It is reported in metric tonnes.

SECONDARY PROCESSED WOOD AND PAPER PRODUCTS

Further processed sawnwood

Wood sawn or chipped lengthwise (including strips and friezes for parquet flooring, not assembled) and continuously shaped (tongued, grooved, rebated, V-jointed, beaded, moulded, rounded or the like) along any of its edges or faces, whether or not planed, sanded or finger jointed. It excludes: sawn or chipped wood with further treatment of edges and/or faces other than planing, or sanding.

Wooden wrapping and packaging material

Packing cases, boxes, crates, drums and similar packings, of wood; cable-drums of wood; pallets, box pallets and other load boards, of wood; pallet collars of wood. Casks, barrels, vats, tubs and other coopers' products and parts thereof, of wood, including staves.

Builder's joinery and carpentry of wood

Including windows and doors and coverings thereof as well as cellular wood panels, assembled parquet panels, shingles and shakes.

Wooden furniture

Seats with wooden frames such as wooden camping and garden seats etc., and parts thereof., except: seats convertible into beds, swivel seats, medical seats. Wooden furniture other than seats as of a kind used in offices, in the kitchen, bedrooms and elsewhere, as well as parts of all these.

Prefabricated buildings preponderantly made of wood

E.g.: Log cabins, houses prefabricated from particle board.

Secondary paper products

It includes all articles of paper ready for use. It excludes paper in rolls and sheets cut in the formats specified in paper and paperboard.

Composite paper and paperboard

Composite paper and paperboard (made by sticking flat layers of paper or paperboard together with an adhesive), not surface-coated or impregnated, whether or not internally reinforced, in rolls or sheets.

Special coated paper and pulp products

Paper, paperboard, cellulose wadding and webs of cellulose fibres, coated, impregnated, covered, surface-coloured, surface-decorated or printed, in rolls or sheets. It excludes composite paper and paperboard (made by sticking flat layers of paper or paperboard together with an adhesive), not surface-coated or impregnated, but possibly laminated internally with bitumen, tar or asphalt, in rolls or sheets.

Carbon paper and copying paper, ready for use

Carbon paper, self-copy paper and other copying or transfer, duplicator stencils and offset plates, of paper, whether or not put up in boxes. It excludes raw carbon, self-copy and other copying or transfer papers in paper in rolls or sheets.

Household and sanitary paper

Products ready for use: toilet paper and similar paper, cellulose wadding or webs of cellulose fibres, of a kind used for household or sanitary purposes, in rolls of a width not exceeding 36 cm, or cut to size or shape. It includes e.g. handkerchiefs, cleansing tissues, towels, tablecloths, serviettes, napkins for babies, tampons, bed sheets and similar household, sanitary or hospital articles, articles of apparel and clothing accessories, of paper pulp, paper, cellulose wadding or webs of cellulose fibres. It excludes sanitary paper produced stock.

Packaging cartons, boxes etc.

Cartons, boxes, cases, bags and other packing containers, of paper, paperboard, cellulose wadding or webs of cellulose fibres; box files, letter trays, and similar articles, of paper or paperboard of a kind used in offices, shops or the like.

Other articles of paper and paperboard, ready for use

Products ready for use: e.g. wallpaper and similar wall coverings; window transparencies of paper; floor coverings on a base of paper or of paperboard, whether or not cut to size; all office material like for correspondence, document storage as well as albums, labels of all kinds, bobbins, spools, cops and similar supports of paper pulp, paper or paperboard (whether or not perforated or hardened); all other paper, paperboard, cellulose wadding and webs of cellulose fibres, cut to size or shape; other articles of paper pulp, paper, paperboard, cellulose wadding or webs of cellulose fibres.

Filter paper and paperboard, ready for use

Printing and writing paper, ready for use

For example: strips or rolls for office machines, continuous forms.

Articles, moulded or pressed from pulp

For example: packagings for eggs.

Printed articles

Printed books

Printed books, brochures, leaflets and similar printed matter, whether or not in single sheets.

Newspapers

Newspapers, journals and periodicals, whether or not illustrated or containing advertising material.

Other printed articles

Children's picture, drawing or colouring books; music, printed or in manuscript, whether or not bound or illustrated; maps and hydrographic or similar charts of all kinds, including atlases, wall maps, topographical plans and globes, printed; plans and drawings for architectural, engineering, industrial, commercial, topographical or similar purposes, being originals drawn by hand; hand-written texts; photographic reproductions on sensitised paper and carbon copies of the foregoing; unused postage, revenue or similar stamps of current or new issue in the country to which they are destined; stamp-impressed paper; banknotes; cheque forms; stock, share or bond certificates and similar documents of title; transfers (decalcomania); printed or illustrated postcards; printed cards bearing personal greetings, messages or announcements, whether or not illustrated, with or without envelopes or trimmings; calendars of any kind, printed, including calendar blocks; other printed matter, including printed pictures and photographs.

ENGINEERED WOOD PRODUCTS

These definitions come from APA-The Engineered Wood Association. APA classifies glued engineered wood products into three general groups: 1. glued laminated timber (glulam), 2. structural composite lumber (SCL) consisting primarily of laminated veneer lumber (LVL), but also parallel strand lumber and oriented strand lumber, and 3. wood I-beams.

Glued laminated timber (glulam)

Glulam is an engineered stress-rated product created by adhesively bonding together individual pieces of lumber having a thickness of 50 mm (2 inches) or less. It's one of the most versatile of the engineered wood products. It can be easily shaped into forms ranging from straight beams to complex curved members and is used for a wide variety of structural applications in both residential and nonresidential construction. Glulam is used typically for headers, girders, purlins, beams, arches, and in exposed applications such as bridges, marinas and transmission structures.

Structural composite lumber

Laminated Veneer Lumber (LVL)

LVL is the most widely used of the structural composite lumber products. It is produced by adhesively bonding thin wood veneers together in a large billet so that the grain of all veneers is parallel to the long direction. The LVL billet is then sawn to desired dimensions depending on the construction application. Some of the many uses are in header and beam applications, hip and valley rafters, as scaffold planking and as flange material for wood I-beams.

Parallel Strand Lumber (PSL)

PSL consists of long veneer strands laid in parallel formation and bonded together with an adhesive to form beams. Like LVL and glulam, this product is used for beam and header applications where high bending strength is needed.

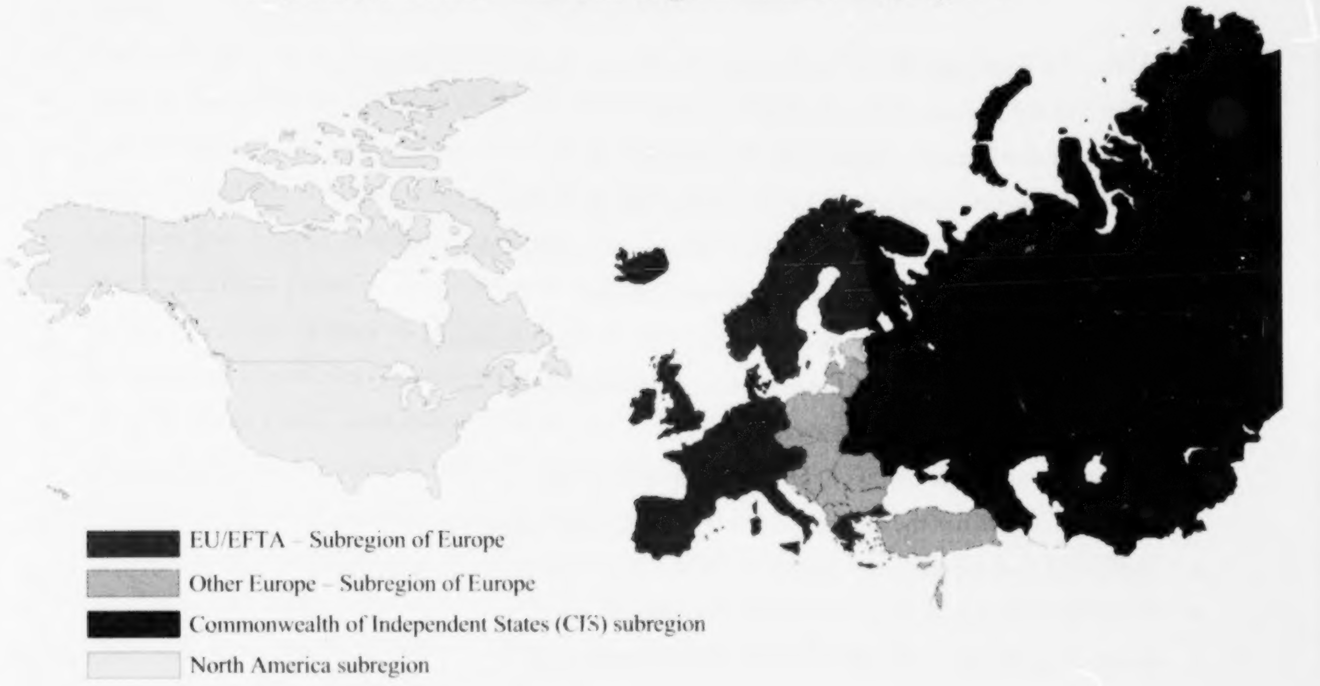
Oriented Strand Lumber (OSL)

Similar to PSL, oriented strand lumber is made from flaked wood strands that have a high length-to-thickness ratio. Combined with an adhesive, the strands are oriented and formed into a large mat or billet and pressed. OSL is used in a variety of applications from studs to millwork components.

Wood I-beams

Wood I-beams are structural, load-carrying products designed mostly for floor joist applications. The beams offer long length and low material weight. Their "I" configuration provides high strength and stiffness. The flange material for I-beams is typically dimension lumber or LVL; the web material is typically oriented strand board (OSB) or plywood. Wood I-beams, used extensively in residential construction, continue to be the fastest growing of the glued engineered wood products.

Countries in the UNECE region and its subregions


EU/EFTA – Subregion of Europe
Other Europe – Subregion of Europe
Commonwealth of Independent States (CIS) subregion
North America subregion

"EU/EFTA" –subregion of Europe

Austria
Belgium
Denmark
Finland
France
Germany
Greece
Iceland
Ireland
Italy
Liechtenstein
Luxembourg
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom

"Other Europe" –subregion of Europe

Albania
Andorra
Bosnia-Herzegovina
Bulgaria
Croatia
Cyprus
Czech Republic
Estonia
Hungary
Israel
Latvia
Lithuania
Malta
Monaco
Poland
Romania
San Marino
Slovak Republic
Slovenia
The former Yugoslav Republic of Macedonia
Turkey
Yugoslavia

Commonwealth of Independent States (CIS) subregion

Armenia
Azerbaijan
Belarus
Georgia
Kazakhstan
Kyrgyzstan
Republic of Moldova
Russian Federation
Tajikistan
Turkmenistan
Ukraine
Uzbekistan

North America subregion

Canada
United States of America

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- *Random Lengths Yardstick*, United States, (http://www.randomlengths.com)
- *Statistische Bundesamt Preise*, Reiche 1; Reiche 2, Germany (http://www.destatis.de)
- Statistics Canada, Canada, (http://www.statcan.ca)
- Swedish National Board for Industrial and Technical Development (NUTEK), (http://www.nutek.se)
- Swedish National Energy Administration, (http://www.stem.se)
- Swedish Wood Association, (http://www.stef.se)
- Swiss Federal Statistical Office, Switzerland (http://www.statistik.admin.ch/)
- *Timber & Wood Products* (TTJ), United Kingdom, (http://www.ttjonline.com/)
- UNECE/FAO TIMBER database, (http://www.unece.org/trade/timber)
- United States Census Bureau –United States Department of Commerce, (http://www.census.gov)
- USDA Foreign Agricultural Service, United States, (http://ffas.usda.gov)
- USDA Forest Service, United States, (http://www.fs.fed.us)
- *Weekly Hardwood Review*, United States, (http://www.hardwoodreview.com)
- *Wood Based Panels*, United Kingdom, (http://www.ttjonline.com/)
- *Wood Markets Monthly*, United States, (http://www.woodmarkets.com)
- *Wood Products Statistical Roundup*, American Forest and Paper Association, United States, (http://www.afandpa.org)
- WWF –Forests for Life, (http://www.panda.org/forests4life)
- ZMP –Zentrale Markt- und Preisberichtstelle für Erzeugnisse der Land-, Forst- und Ernährungswirtschaft GmbH, Germany, (http://www.zmp.de)

Special chapters in former *Forest Products Annual Market Reviews*

Note to readers: We have found that some chapters of the *Review* have a longer life than the *Annual Market Review*. The following is a listing of all the special chapters, including their most important sections, in order to give an idea of their contents. Back issues are available on the Timber Committee website or through the secretariat.

Timber Bulletin –Volume LV (2002)

Chapter 3 "Market effects of wood promotion", 11 pages

- Introduction
- Market and market effects
- How to reach market effects by wood promotion
- Wood promotion of recent years is a success story!
- Successful organizations
- Is wood promotion in danger?
- References

Chapter 4 "Trade links strengthening as Turkey's forest sector is modernized. Turkey's forest products markets", 12 pages

- Secretariat introduction
- General economic development
- Forest resources
- Institutional framework
- Roundwood market
- Forest products industries
- Foreign trade of wood products
- Wood furniture
- Paper industry
- Prospects for Turkey's wood markets

Chapter 5 "Chile's forest products markets - a plantation success story", 8 pages

- Introduction
- General economic developments
- Forest resources
- Institutional framework for forest and wood industries
- Wood industry – production and consumption
- Trade of wood and wood products
- Prospects for the future of the Chilean wood industry
- Conclusion
- References

Timber Bulletin –Volume LIV (2001)

Chapter 3 "Romania's Forest Products Markets", 12 pages

- Secretariat introduction
- General economic developments
- Forest resources
- Institutional framework – forest policy
- The effects of the transition process
- Forest products industry –production and consumption

- Trade of wood and wood products
- Integration into the EU
- Prospects for wood industry

Chapter 4 ***"Influence on Japanese demand for wood products", 10 pages***
- Introduction
- Background
- Wood use trends
- General trends impacting wood use
- Summary
- References

Timber Bulletin –Volume LIII (2000)

Chapter 3 ***"Effects of the December 1999 storms on European timber markets", 15 pages***
- Introduction
- Damage magnitude: the equivalent of 2 years' harvest in 3 days!
- Market effects: potential enormous imbalances mitigated through sector solidarity
- Comparisons with 1990 market effects: similar problems and solutions
- Assistance by governments: quick and multi-dimensional responsiveness
- Positive outcomes?
- Conclusion

Chapter 4 ***"Poland's forest products markets", 12 pages***
- Secretariat introduction
- General economic developments
- Forest resources
- Institutional framework for forest and forest industries
- Effects of the transition process
- Integration into the EU
- Forest industry –production and consumption
- Trade of wood and wood products
- Certified forest products
- Prospects for wood industry

Chapter 5 ***"China's forest products markets", 19 pages***
- Secretariat introduction
- General socio-economic development
- Forest resources
- Institutional framework
- Analysis and development of production of China's major forest products, 1981 to 1999
- Development of China's forest product trade from 1981 to 1999
- China's forests product trade in 1999
- Consumption of major forest products, with international comparisons
- Projections of demand and supply of China's forest products to 2010

Chapter 6 ***"Secondary processed wood products markets", 10 pages***
- Secretariat introduction
- Introduction
- Secondary processed wood products
- Main flows and trade patterns
- Market profiles
- Conclusion

Chapter 11 "Engineered wood products –production, trade, consumption and outlook", 16 pages

- Secretariat note
- Introduction
- Current market situation
- Production, consumption and trade statistics
- Outlook for EWPs
- Conclusions

Timber Bulletin –Volume LII (1999)

Chapter 3 "Estonia's Forest Products Market", 7 pages

- General economic development
- Forest resources
- Institutional framework
- Forest industry
- Trade of wood and wood products

Chapter 4 "New Zealand's Forest Products Market", 7 pages

- Background to New Zealand's plantation forestry sector
- Market conditions
- Forestry production and trade 1998/1999

Chapter 5 "Trade Restrictions and the Future", 10 pages

- The question of market access
- Trends in tariffs and non-tariff measures
- Trade impediments
- Implications of further trade liberalization

Chapter 6 "Forest Products in the Electronic Market Place", 6 pages

- WWW-sites for forest products trade
- North American and European electronic commerce
- The role of the ECE Trade Division in electronic commerce

Chapter 13 "Tropical Timber Developments", 16 pages, (has since become annual chapter)

- Production, exports, imports
- Tropical timber consumption and price trends
- Strengthening Asian currencies

Some facts about the Timber Committee

The Timber Committee is a principal subsidiary body of the UNECE (United Nations Economic Commission for Europe) based in Geneva. It constitutes a forum for cooperation and consultation between member countries on forestry, forest industry and forest product matters. All countries of Europe; the former USSR; United States, of America, Canada and Israel are members of the UNECE and participate in its work.

The UNECE Timber Committee shall, within the context of sustainable development, provide member countries with the information and services needed for policy- and decision-making regarding their forest and forest industry sector ("the sector"), including the trade and use of forest products and, when appropriate, formulate recommendations addressed to member Governments and interested organizations. To this end, it shall:

1. With the active participation of member countries, undertake short-, medium- and long-term analyses of developments in, and having an impact on, the sector, including those offering possibilities for the facilitation of international trade and for enhancing the protection of the environment;
2. In support of these analyses, collect, store and disseminate statistics relating to the sector, and carry out activities to improve their quality and comparability;
3. Provide the framework for cooperation e.g. by organizing seminars, workshops and ad hoc meetings and setting up time-limited ad hoc groups, for the exchange of economic, environmental and technical information between governments and other institutions of member countries that is needed for the development and implementation of policies leading to the sustainable development of the sector and to the protection of the environment in their respective countries;
4. Carry out tasks identified by the UNECE or the Timber Committee as being of priority, including the facilitation of subregional cooperation and activities in support of the economies in transition of central and eastern Europe and of the countries of the region that are developing from an economic point of view;
5. It should also keep under review its structure and priorities and cooperate with other international and intergovernmental organizations active in the sector, and in particular with the FAO (Food and Agriculture Organization of the United Nations) and its European Forestry Commission and with the ILO (International Labour Organisation), in order to ensure complementarity and to avoid duplication, thereby optimizing the use of resources.

More information about the Committee's work may be obtained by writing to:

Timber Branch
Trade Development and Timber Division
UN Economic Commission for Europe
Palais des Nations
CH - 1211 Geneva 10, Switzerland
Fax: + 41 22 917 0041
E-mail: info.timber@unece.org
Website address: http://www.unece.org/trade/timber

UNECE/FAO Publications

Timber Bulletin Volume LV (2002) **ECE/TIM/BULL/2002/...**

1. Forest Products Prices, 1998-2000
2. Forest Products Statistics, 1997-2001 (database since 1964 on website)
3. Forest Products Annual Market Review, 2001-2002
4. Forest Fire Statistics, 1999-2001
5. Forest Products Trade Flow Data, 1999-2000
6. Forest Products Markets in 2002 and Prospects for 2003

Geneva Timber and Forest Study Papers

Forest policies and institutions of Europe, 1998-2000	ECE/TIM/SP/19
Forest and Forest Products Country Profile: Russian Federation	ECE/TIM/SP/18
(Country profiles also exist on Albania, Armenia, Belarus, Bulgaria, former Czech and Slovak Federal Republic, Estonia, Hungary, Lithuania, Poland, Romania, Republic of Moldova, Slovenia and Ukraine)	
Forest resources of Europe, CIS, North America, Australia, Japan and New Zealand	ECE/TIM/SP/17
State of European forests and forestry, 1999	ECE/TIM/SP/16
Non-wood goods and services of the forest	ECE/TIM/SP/15

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Geneva Timber and Forest Discussion Papers (original language only)

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Forestry Cooperation with Countries in Transition	ECE/TIM/DP/28
Russian Federation Forest Sector Outlook Study	ECE/TIM/DP/27
Forest and Forest Products Country Profile: Georgia	ECE/TIM/DP/26
Forest Certification update for the UNECE region, summer 2002	ECE/TIM/DP/25
Forecasts of Economic Growth in OECD and Central and Eastern European Countries for the period 2000-2040 (EFSOS)	ECE/TIM/DP/24
Forest Certification update for the ECE Region, summer 2001	ECE/TIM/DP/23
Structural, Compositional and Functional Aspects of Forest Biodiversity in Europe	ECE/TIM/DP/22
Markets for secondary processed wood products, 1990-2000	ECE/TIM/DP/21
Forest certification update for the ECE Region, summer 2000	ECE/TIM/DP/20
Trade and environment issues in the forest and forest products sector	ECE/TIM/DP/19
Multiple use forestry	ECE/TIM/DP/18
Forest certification update for the ECE Region, summer 1999	ECE/TIM/DP/17
A summary of "The competitive climate for wood products and paper packaging: the factors causing substitution with emphasis on environmental promotions"	ECE/TIM/DP/16
Recycling, energy and market interactions	ECE/TIM/DP/15
The status of forest certification in the ECE region	ECE/TIM/DP/14
The role of women on forest properties in Haute-Savoie (France): Initial researches	ECE/TIM/DP/13
Interim report on the Implementation of Resolution H3 of the Helsinki Ministerial Conference on the protection of forests in Europe (Results of the second enquiry)	ECE/TIM/DP/12
Manual on acute forest damage	ECE/TIM/DP/7

International Forest Fire News (two issues per year)

Timber and Forest Information Series

Timber Committee Yearbook 2003	ECE/TIM/INF/10

The above series of publications may be requested free of charge through:

Timber Branch
UNECE Trade Development and Timber Division
United Nations
Palais des Nations
CH - 1211 Geneva 10, Switzerland
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E-mail: info.timber@unece.org

Downloads are available at http://www.unece.org/trade/timber

Reader Survey

In an effort to continually improve the UNECE/FAO *Timber Bulletin*, readers of the "*Forest Products Annual Market Analysis*" are encouraged to express their opinions on its content, presentation and distribution. In order to better meet readers' needs, we would like to know more about our readership and their uses of the *Annual Market Analysis*. Please fax or e-mail your response to the address below. Thank you.

Your name:______________________________ Country: ____________________

Job title: ____

What are your market-related activities? ____________________________________

____

Organisation/Company/Institution/Ministry: ______________________________

Your e-mail address (optional): ___________________________________

1. For what purposes do you use this *Annual Market Analysis?* (Indicate all which apply.)

   a. ____ Market sector analyses
   b. ____ Statistical information
   c. ____ Policy development
   d. ____ Information for re-publication
   e. ____ Preparation for Timber Committee market discussions
   f. ____ Other: (please specify)

2. Please rate the chapters and information that were most useful and interesting for you? (1 to 13; 1 the most useful and interesting, 13 the least)

   1. ____ Overview of market and policies
   2. ____ Policy implications of market developments
   3. ____ Economic and construction developments
   4. ____ Wood raw materials
   5. ____ Sawn softwood
   6. ____ Sawn hardwood
   7. ____ Wood-based panels
   8. ____ Paper, paperboard and woodpulp
   9. ____ Certified forest products
   10. ____ Value added forest products
   11. ____ Tropical timber
   12. ____ Annex references
   13. ____ Electronic annex tables

3. We eliminated the former special topic chapters in this issue (see listing in annex 5). Instead we produced one supplementary *Geneva Timber and Forest Discussion Paper* on "Serbia's Forest Products Markets". Do you miss the former special chapters in the Annual Market Analysis? _____Yes _____No

4. How did you hear about the *Market Analysis?* ______________________________

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Thank you again for your time in assisting us to improve the *Annual Market Analysis* for our readers! Please return your survey to: info.timber@unece.org or by fax to: +41 22 917 0041

The *Forest Products Annual Market Analysis, 2002-2004* provides a comprehensive analysis of the UNECE region, including the Commonwealth of Independent States, Europe and North America. The *Analysis* covers forest products from the forest to the final consumer, i.e., from roundwood and primary-processed products to value-added products. Each issue includes extensive statistical information combined with an analysis of trends and developments. This year national forecasts for 2003 and 2004 have also been incorporated. Standard statistics-based chapters are presented on sawn softwood, sawn hardwood, wood-based panels, wood raw materials and pulp and paper. Other annual chapters analyze markets for certified forest products, value-added wood products and tropical timber.

This year's *Analysis* includes a special chapter covering policy implications of market developments. This chapter reviews current issues such as forest law enforcement and governance, climate change and the sound use of wood.

The *Forest Products Annual Market Analysis* and its predecessor publications have been published annually since 1948 by the UNECE/FAO Timber Branch. Its goal is to provide comprehensive statistics and analysis on forest products markets with an emphasis on policy implications. This information is intended for policy makers, researchers, investors and forest products marketing specialists in governments, research institutions, universities and the private business sector. This *Analysis* is intended for use, in draft format, as a background document for the UNECE Timber Committee' s market discussions held at its annual session.

Further information about forest products markets, as well as information about the UNECE Timber Committee and the FAO European Forestry Commission is available on the website www.unece.org/trade/timber. Information about the UNECE may be found at www.unece.org and information about FAO may be found at www.fao.org.

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